

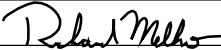
INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN NO. 1
2.	GENERAL PLAN NO. 2
3.	INDEX TO PLAN
4.	FOUNDATION PLANS
5.	RETAINING WALL 1 LAYOUT NO. 1
6.	RETAINING WALL 1 LAYOUT NO. 2
7.	RETAINING WALL 1 LAYOUT NO. 3
8.	RETAINING WALL 3 LAYOUT NO. 1
9.	RETAINING WALL 3 LAYOUT NO. 2
10.	RETAINING WALL 5 LAYOUT
11.	RETAINING WALL DETAILS
12.	DRAINAGE DETAILS
13.	BARRIER TRANSITION DETAILS
14.	ARCHITECTURAL TREATMENT DETAILS NO. 1
15.	ARCHITECTURAL TREATMENT DETAILS NO. 2
16.	ARCHITECTURAL TREATMENT DETAILS NO. 3
17.	ARCHITECTURAL TREATMENT DETAILS NO. 4
18.	LIGHTING SYSTEM DETAILS
19.	EXCAVATION AND BACKFILL DETAILS
20.	LOG OF TEST BORINGS 1 OF 8
21.	LOG OF TEST BORINGS 2 OF 8
22.	LOG OF TEST BORINGS 3 OF 8
23.	LOG OF TEST BORINGS 4 OF 8
24.	LOG OF TEST BORINGS 5 OF 8
25.	LOG OF TEST BORINGS 6 OF 8
26.	LOG OF TEST BORINGS 7 OF 8
27.	LOG OF TEST BORINGS 8 OF 8

STANDARD PLANS DATED MAY 2010

	A10A	ACRONYMS AND ABBREVIATIONS (A-L) (SHEET 1 OF 2)
	A10B	ACRONYMS AND ABBREVIATIONS (M-Z) (SHEET 2 OF 2)
	A10C	SYMBOLS (SHEET 1 OF 2)
	A10D	SYMBOLS (SHEET 2 OF 2)
	A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
	A76A	CONCRETE BARRIER TYPE 60
RSP -	B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP -	B3-5	RETAINING WALL DETAILS NO. 1
	B3-6	RETAINING WALL DETAILS NO. 2
RSP -	B11-47	CABLE RAILING
	ES-1A	ELECTRICAL SYSTEMS (LEGEND, NOTES AND ABBREVIATIONS)
	ES-7M	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD DETAILS NO. 1)
	ES-7N	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD DETAILS NO. 2)
	ES-7O	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD DETAILS NO. 3)
	ES-7R	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING MISCELLANEOUS ATTACHMENT

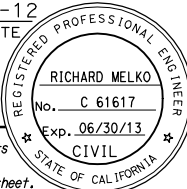
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Fre				



05-30-12


REGISTERED CIVIL ENGINEER

DATE



PLANS APPROVAL DATE _____

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CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:

AASHTO LRFD Bridge Design Specifications, 4th edition and the California Amendments Preface dated, December 2011.

DEAD LOAD:

See Standard Plans RSP B3-1A.

LIVE LOAD SURCHARGE:

Varied surcharge on level ground surface.

SEISMIC:

$$K_h = 0.2 \text{ g} \quad K_v = 0$$

REINFORCED CONCRETE:

$$\begin{aligned} f_y &= 60 \text{ ksi} \\ f'_c &= 3.6 \text{ ksi} \\ n &= 8 \end{aligned}$$

SOIL:

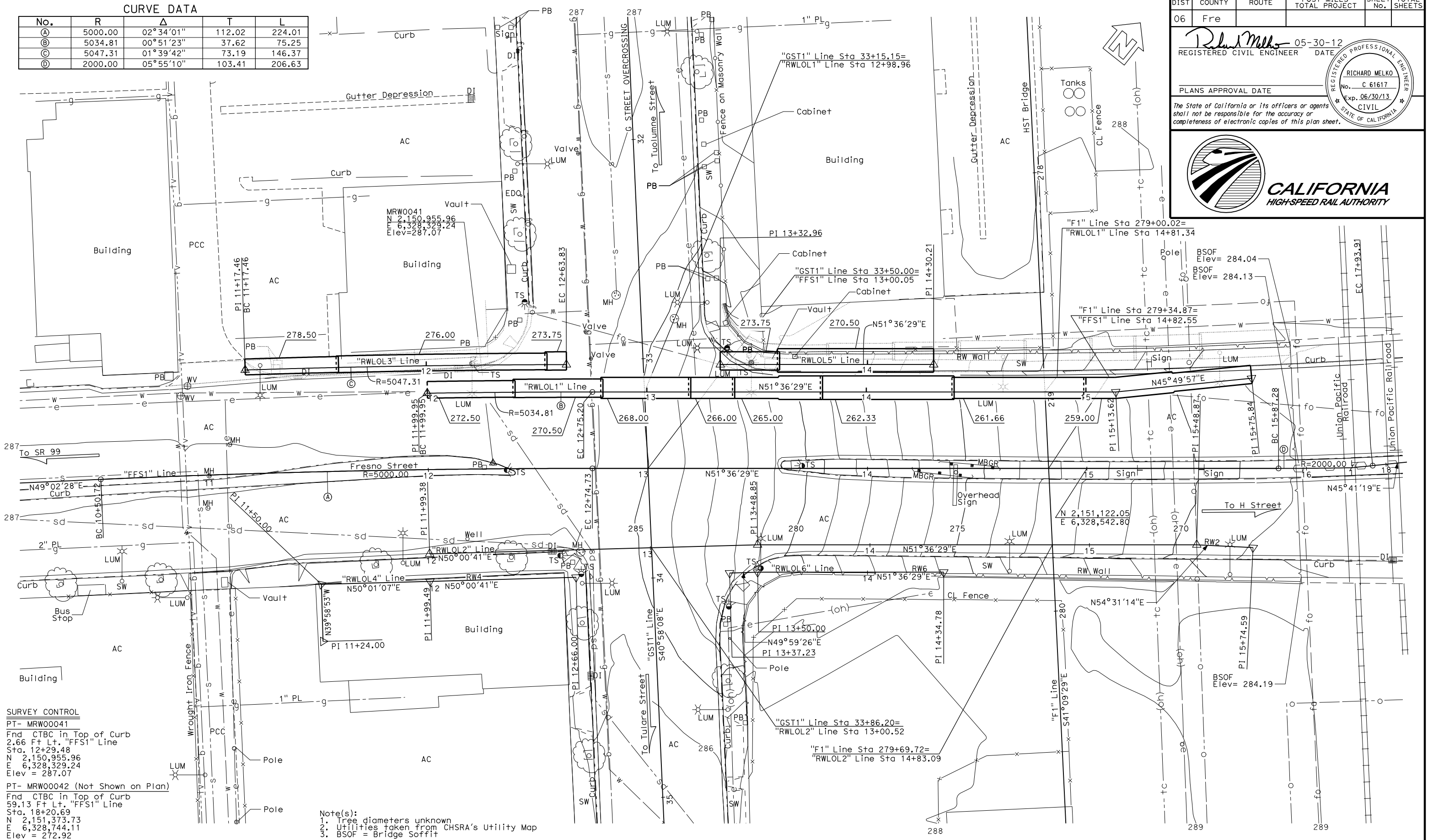
$$\Phi = 34^\circ, \quad \gamma = 120 \text{ pcf}$$

LOAD COMBINATIONS AND LIMITS STATES:

See Standard Plan RSP B3-1A.

			DESIGN	BY M.G.REYES-GUITIERREZ	CHECKED D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5				
			DETAILS	BY K. CHONKRIA	CHECKED R. MELKO								
			QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED R. WASHINGTON			POST MILE		INDEX TO PLANS			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES	SHEET	OF
								FILE => rw1-a-i1-1tp.dgn			05-18-12 05-29-12 05-30-12	3	27

CURVE DATA				
No.	R	Δ	T	L
Ⓐ	5000.00	02°34'01"	112.02	224.01
Ⓑ	5034.81	00°51'23"	37.62	75.25
Ⓒ	5047.31	01°39'42"	73.19	146.37
Ⓓ	2000.00	05°55'10"	103.41	206.63



SURVEY CONTROL
 PT- MRW00041
 Fnd CTBC in Top of Curb
 2.66 Ft Lt. "FFS1" Line
 Sta. 12+29.48
 N 2,150,955.96
 E 6,328,329.24
 Elev = 287.07
 PT- MRW00042 (Not Shown on Plan)
 Fnd CTBC in Top of Curb
 59.13 Ft Lt. "FFS1" Line
 Sta. 18+20.69
 N 2,151,373.73
 E 6,328,744.11
 Elev = 272.92

Note(s):
 1. Tree diameters unknown
 2. Utilities taken from CHSRA's Utility Map
 3. BSOF = Bridge Soffit

PRELIMINARY INVESTIGATION SECTION			
SCALE	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: per CHSRA	
1"=20'	HORZ. DATUM NAD83	SURVEYED	BY District 6
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED	BY C. Fasset	04/12
		CHECKED	BY T. Schmalz 04/12

DESIGN	BY M.G. REYES-GUITIERREZ	CHECKED D. ALVAREZ
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M.G. REYES-GUITIERREZ	CHECKED R. WASHINGTON

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

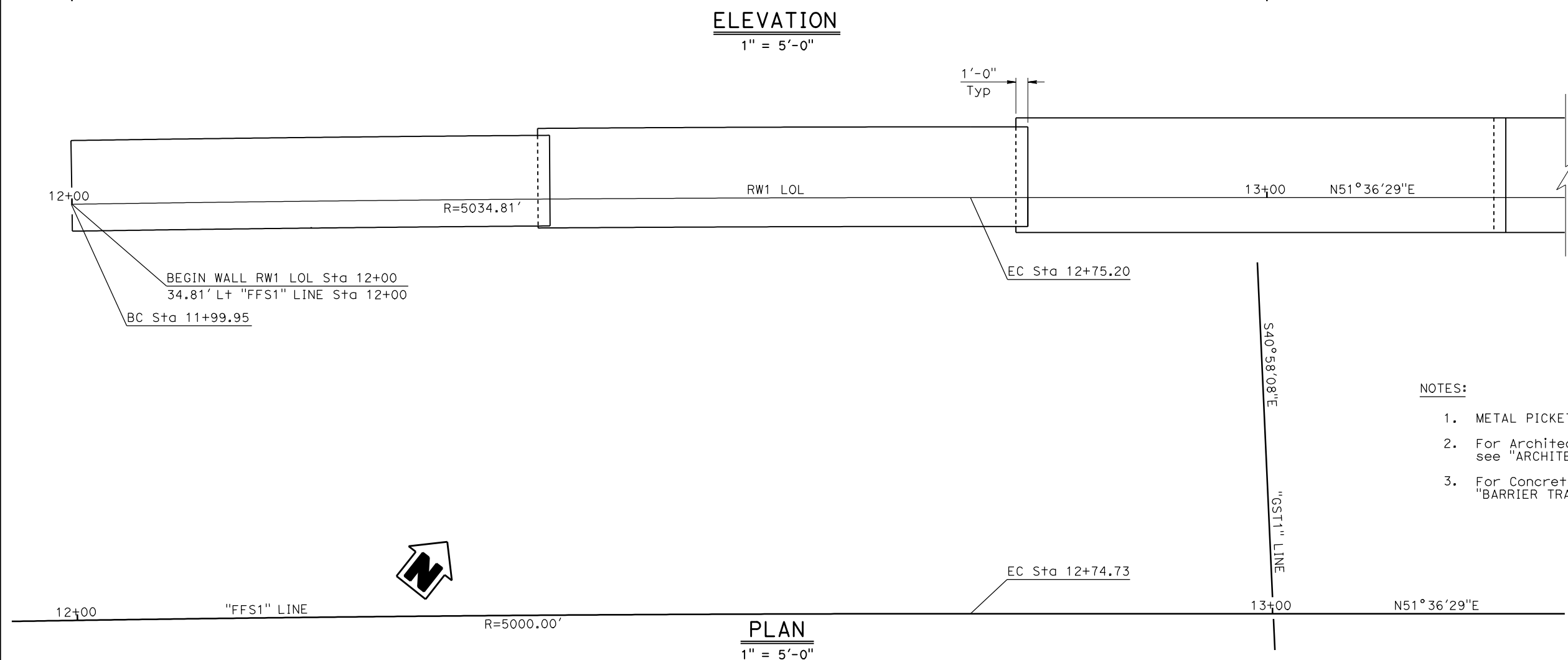
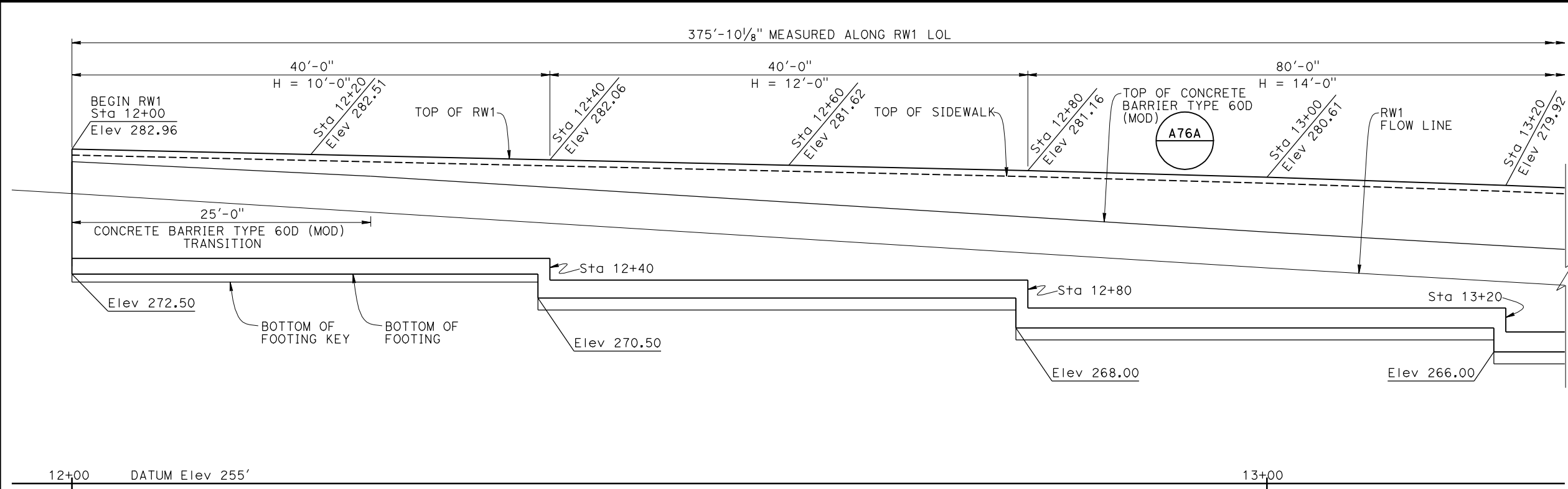
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
 POST MILE

RETAINING WALL NO. 1, 3, 5
FOUNDATION PLAN

DIST 06
COUNTY Fre
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS

05-30-12
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE



- NOTES:
1. METAL PICKET RAILING not shown.
 2. For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.
 3. For Concrete Barrier Type 60D (MOD) transition, see "BARRIER TRANSITION DETAILS" sheet.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

Richard Melko 05-30-12
REGISTERED CIVIL ENGINEER DATE

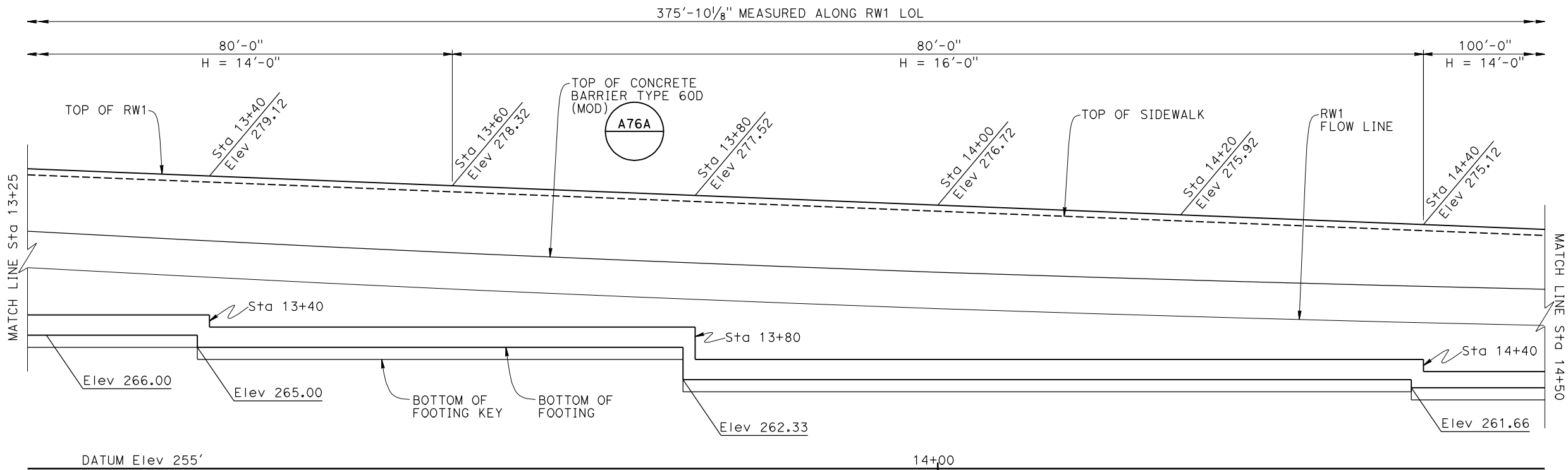
PLANS APPROVAL DATE

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RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

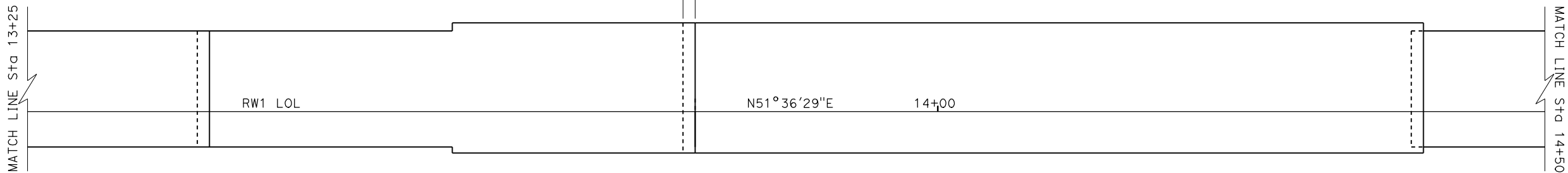
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5					
	DETAILS	BY K. CHONKRIA	CHECKED R. MELKO			POST MILE	RETAINING WALL 1 LAYOUT NO. 1					
	QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED R. WASHINGTON									
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES		SHEET	OF	
				0 1 2 3			→	05-03-12	05-29-12	05-28-12	5	27



ELEVATION

1" = 5'-0"

1'-0"



NOTES:

- METAL PICKET RAILING not shown.
- For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.



N51°36'29"E

"FFS1" LINE

14+00

PLAN

1" = 5'-0"

DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
RETAINING WALL 1 LAYOUT NO. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3

UNIT: 3591 CONTRACT NO.: 06-2HT01
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

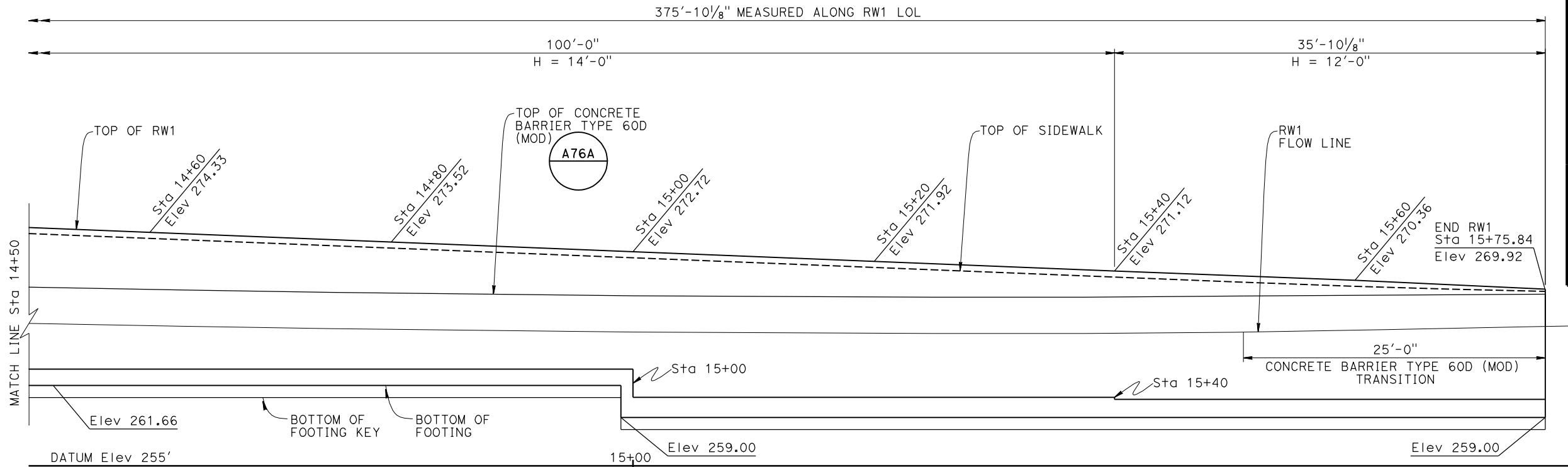
DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES
05-01-12 05-29-12 05-18-12

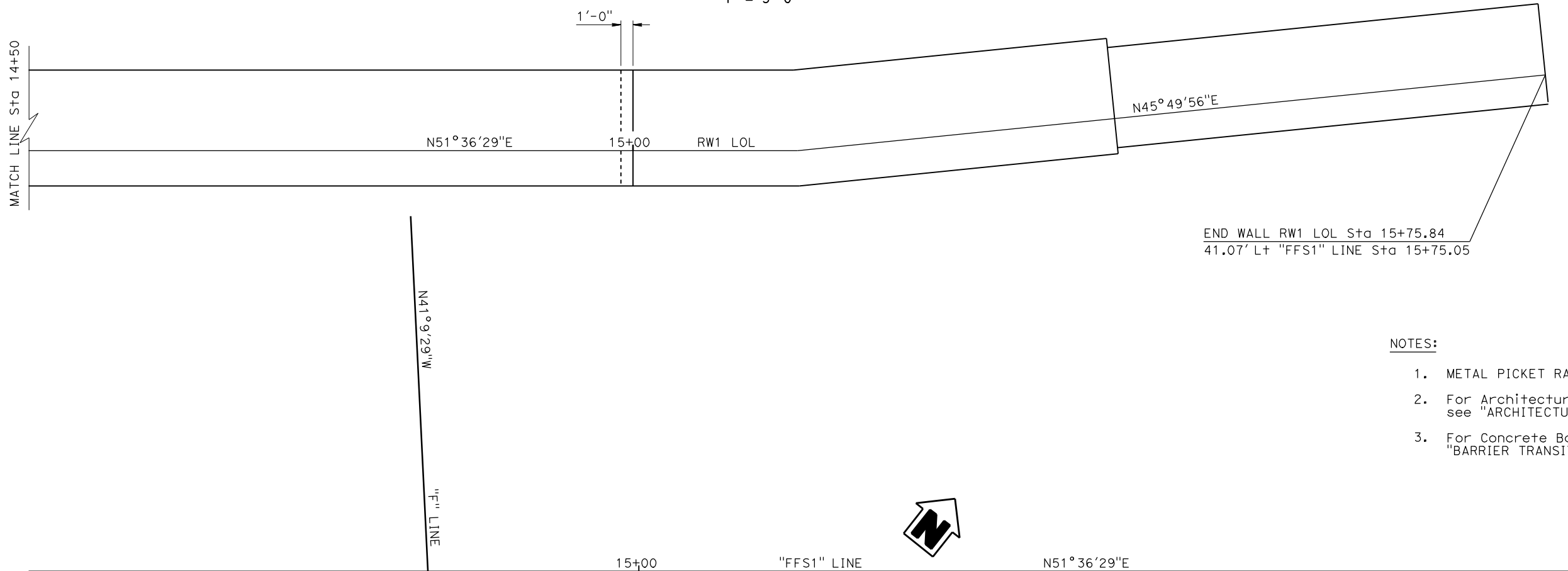
SHEET OF
6 27

FILE => rw1-a-spl02.dgn

USERNAME => s135425 DATE PLOTTED => 30-MAY-2012 TIME PLOTTED => 15:13



ELEVATION
1" = 5'-0"



PLAN
1" = 5'-0"

NOTES:

1. METAL PICKET RAILING not shown.
2. For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.
3. For Concrete Barrier Type 60D (MOD) transition, see "BARRIER TRANSITION DETAILS" sheet.


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

05-30-12
REGISTERED CIVIL ENGINEER DATE

RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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 CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

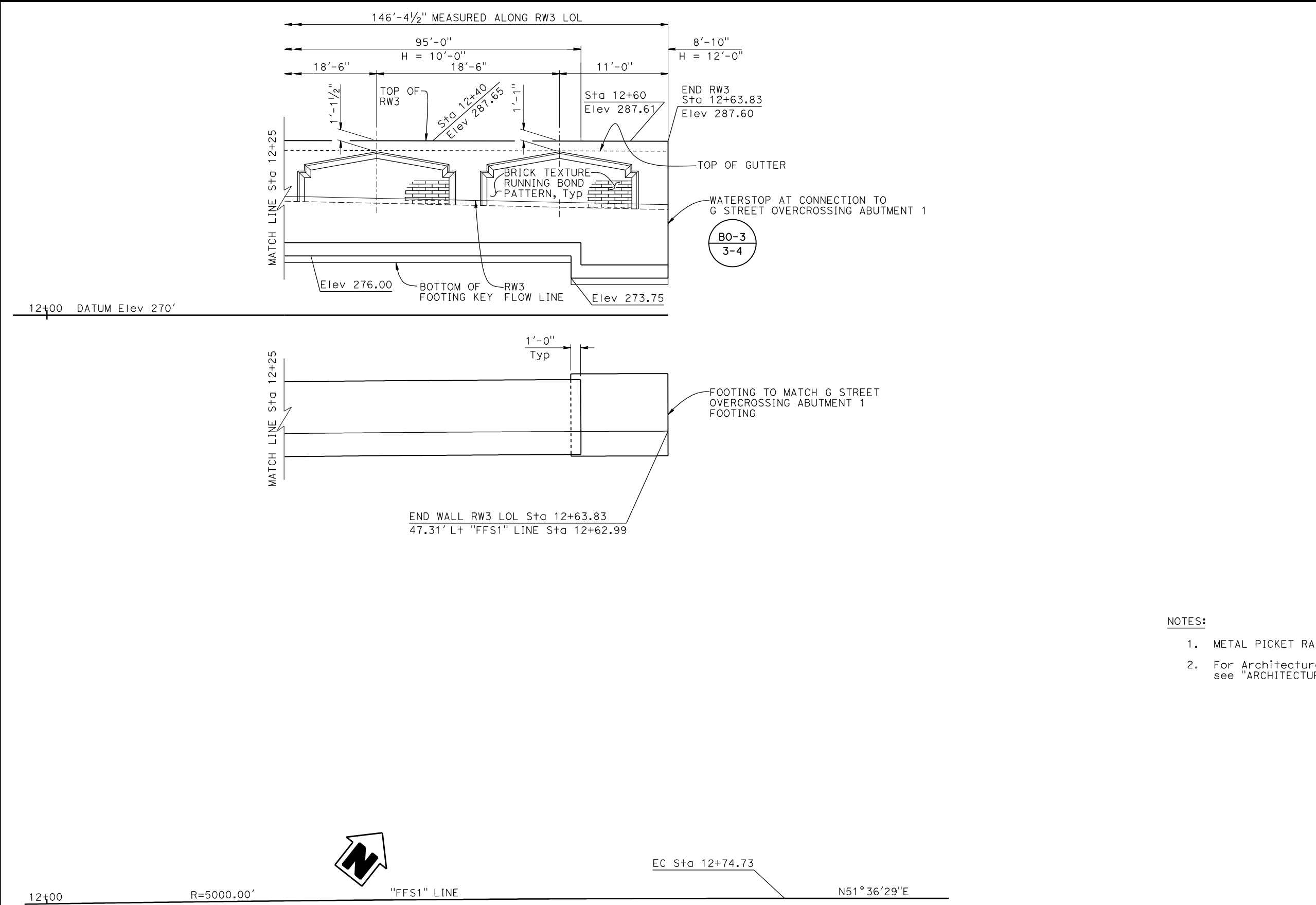
DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
RETAINING WALL 1 LAYOUT NO. 3



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

Richard Melko 05-30-12
REGISTERED CIVIL ENGINEER DATE

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

- NOTES:
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STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5				
	DETAILS	BY K. CHONKRIA	CHECKED R. MELKO			POST MILE	RETAINING WALL 3 LAYOUT NO. 2				
	QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED R. WASHINGTON								
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1			CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES		SHEET	OF
			0 1 2 3					05-01-12 05-14-12 05-23-12 5-29-12	9	27	

DIST06COUNTYFreROUTEPOST MILESTOTAL PROJECT06SHEET No.10TOTAL SHEETS27

Richard Melko

05-30-12

REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617


Exp. 06/30/13

CIVIL

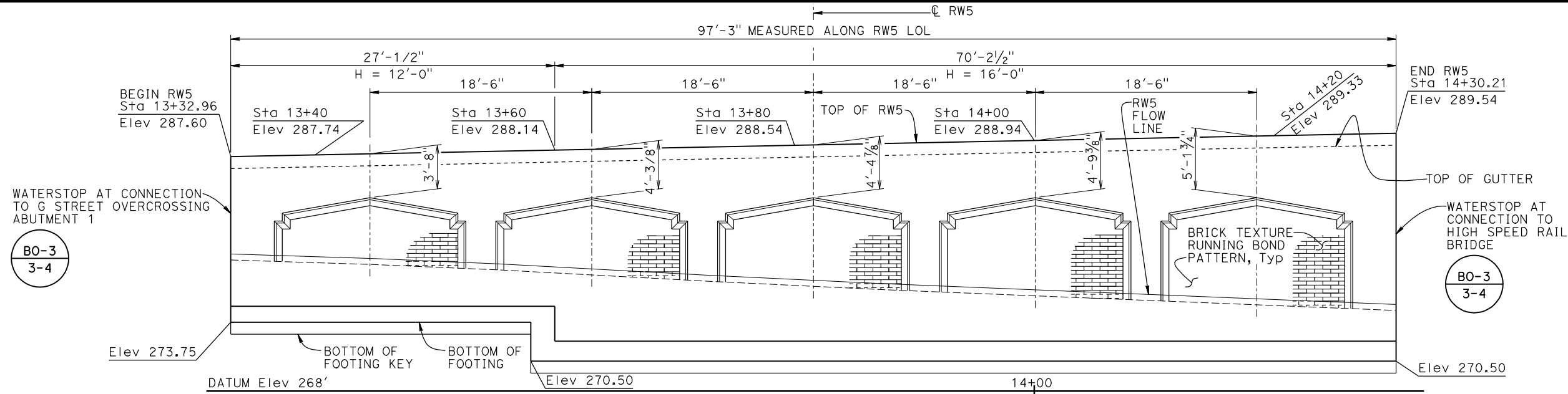
STATE OF CALIFORNIA

PLANS APPROVAL DATE

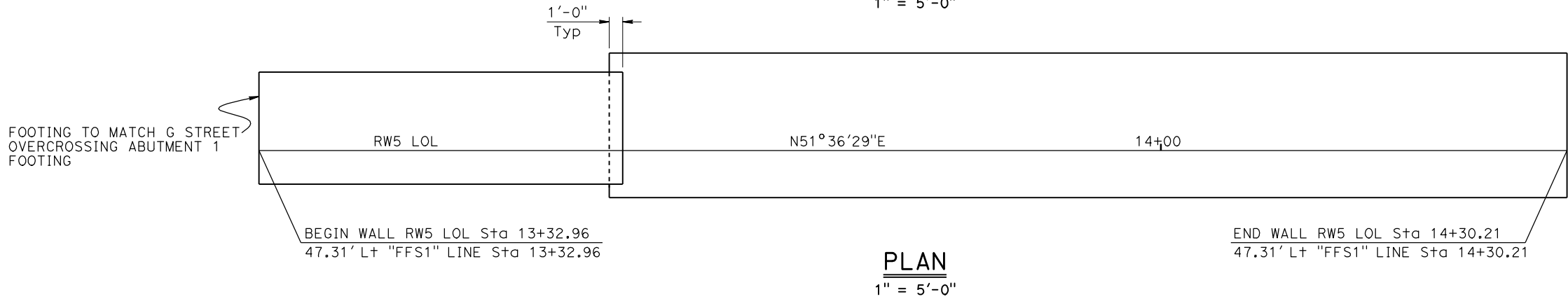
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

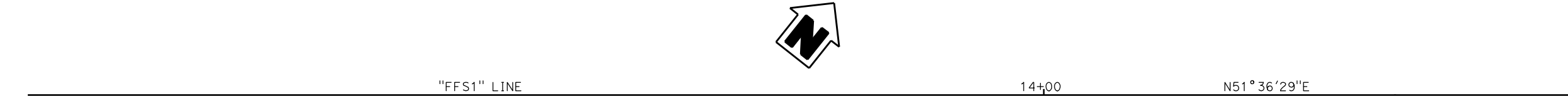


ELEVATION
1" = 5'-0"



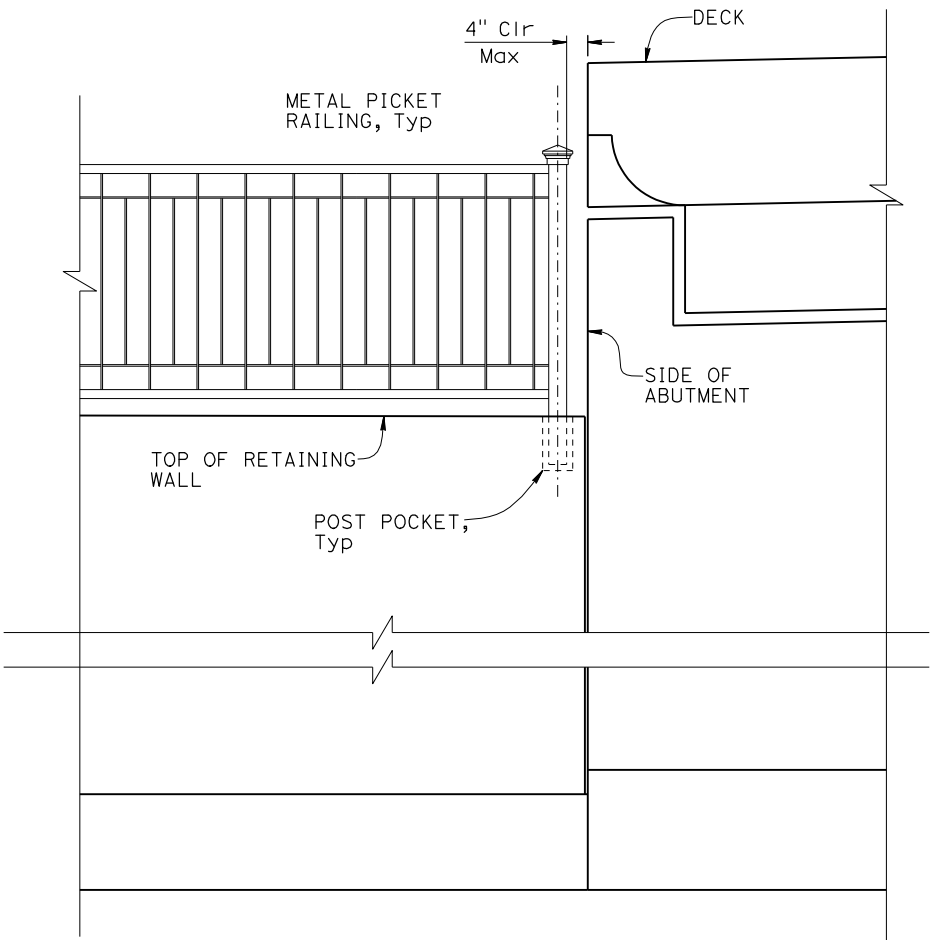
PLAN
1" = 5'-0"

- NOTES:
- METAL PICKET RAILING not shown.
 - For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.

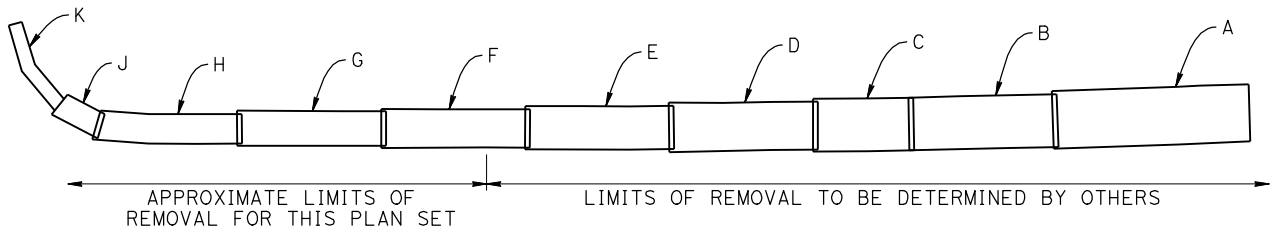


STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5					
	DETAILS	BY K. CHONKRIA	CHECKED R. MELKO			POST MILE	RETAINING WALL 5 LAYOUT					
	QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED R. WASHINGTON									
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0	1	2	3	UNIT: 3591 CONTRACT NO.: 06-2HT01 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				FILE => rw5-a-spl01.dgn								

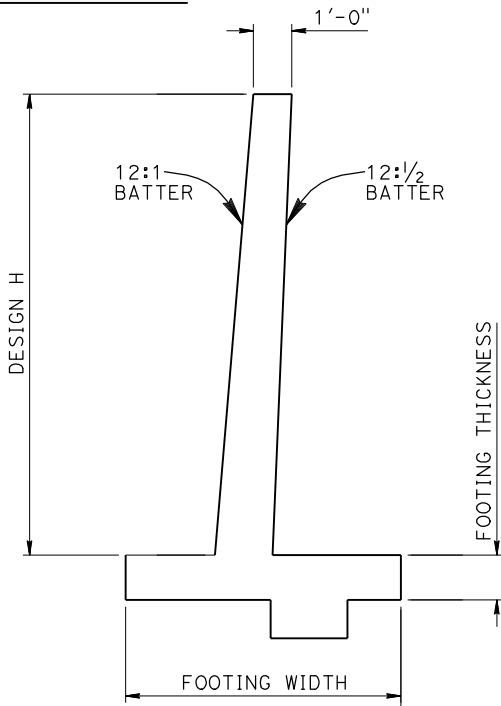
Existing Retaining Wall Data								
Fresno St. Left								
As-Built Wall 2								
Section	Section Length ft	Design H ft	Footing Width ft	Footing Thickness ft	Bottom of Footing Elev ft	Total Volume of Section CYD	% Removed %	CYD Removed CYD
A	40	22	12.00	1.50	264.59	78	0%	0
B	30	20	11.00	1.33	267.26	50	0%	0
C	20	20	11.00	1.33	268.26	34	0%	0
D	30	18	10.00	1.17	269.42	43	0%	0
E	30	16	9.00	1.17	270.92	38	0%	0
F	30	14	8.00	1.17	272.92	33	70%	23
G	30	12	7.17	1.17	274.72	29	100%	29
H	30	10	6.17	1.17	276.72	23	100%	23
J	10	8	5.17	1.17	278.92	7	100%	7
K	20	Gravity Wall			280.69	21	100%	21



METAL PICKET RAILING / BRIDGE ABUTMENT DETAIL
NO SCALE

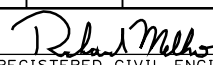


EXISTING WALL FOOTING
NO SCALE

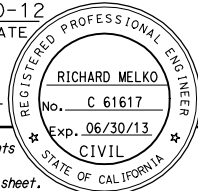


EXISTING WALL
NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				




05-30-12
REGISTERED CIVIL ENGINEER DATE



PLANS APPROVAL DATE _____

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

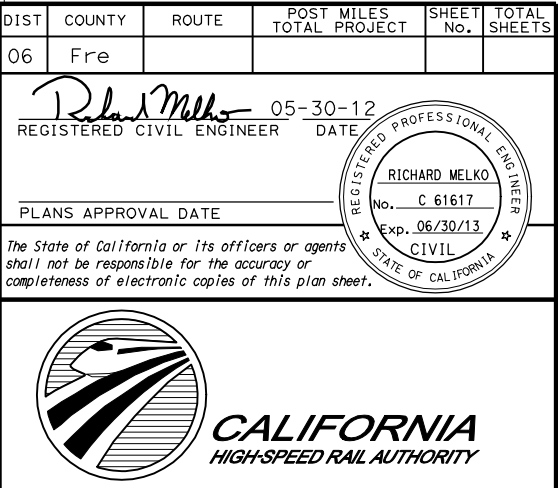
DESIGN	BY R. MELKO	CHECKED S. Morimoto
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY R. Melko/M. G. R. GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
RETAINING WALL DETAILS



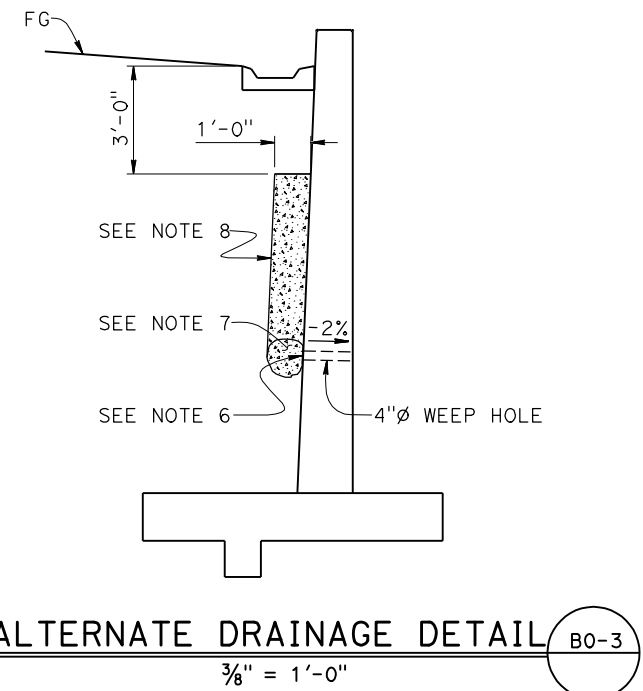
BACK OF WALL

FILTER FABRIC WRAP AROUND

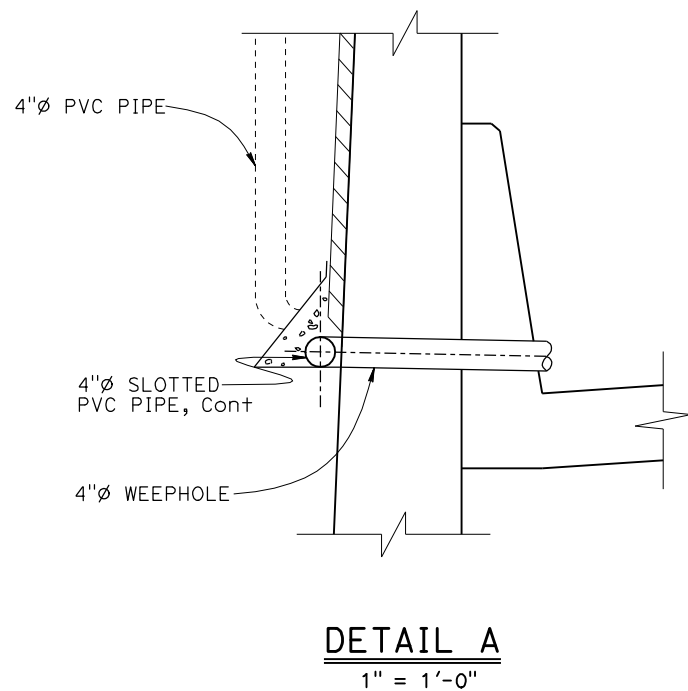
12"

DETAIL "B"

NO SCALE



ALTERNATE DRAINAGE DETAIL



DETAIL A
1" = 1'-0"

- NOTES:**
1. Locate downdrain at Gutter or sidewalk low point behind wall and space downdrain max 50'-0" from low point along wall. Weep holes shall be located at downdrains.
 2. For drainage details not shown, see "STANDARD PLANS".
 3. For cross-slope, see "ROAD PLANS".
 4. For finished grade behind retaining wall, see "ROAD PLANS".
 5. Geocomposite drain per section 88 of the standard specifications.
 6. 6" square aluminum or galvanized steel wire 1/4" mesh hardware cloth, Min wire diameter 0.025". Anchor firmly to backface.
 7. One cubic foot pervious backfill material in nonwoven filter fabric, securely tied.
 8. Pervious backfill material continuous behind retaining wall.
 9. For Architectural Treatment, See "ARCHITECTURAL DETAILS" sheet.

	DESIGN	BY H. PEREZ	CHECKED R. MELKO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5								
	DETAILS	BY K. CHONKRIA	CHECKED H. PEREZ												
	QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON			POST MILE	DRAINAGE DETAILS								
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.		DISREGARD PRINTS BEARING EARLIER REVISION DATES		<div>REVISION DATES</div> <div>05-28-12 05-23-12 05-23-12 05-29-12</div>		SHEET 12	OF 27

DIST

COUNTY

ROUTE

POST MILES
TOTAL PROJECT

SHEET
No.

TOTAL
SHEETS

06

Fre

Richard Melko

05-30-12

REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617

Exp. 06/30/13

CIVIL

STATE OF CALIFORNIA

PLANS APPROVAL DATE

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CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

BEGINNING OF WALL SHOWN, END OF WALL SIMILAR

ELEVATION
1/4" = 1'-0"

BEFORE RETAINING WALL, SEE "ROAD PLANS"

SECTION A-A
3/4" = 1'-0"

ON RETAINING WALL

SECTION B-B
3/4" = 1'-0"

NOTES:

- For barrier transition on roadway details, see "ROAD PLANS".
- For CONCRETE BARRIER TYPE 60D (MOD) details, see "ROAD PLANS".

DESIGN	BY R. MELKO	CHECKED M.G. REYES-GUTIERREZ
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
BARRIER TRANSITION DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

UNIT: X
PROJECT NUMBER & PHASE: 0612000239 1

CONTRACT NO.: 06-2HT01

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES	SHEET	OF
05-30-12	13	27

FILE => rw5-t-brdt.dgn

USERNAME => s135425 DATE PLOTTED => 30-MAY-2012 TIME PLOTTED => 15:13

METAL PICKET
RAILING. SEE
"ARCHITECTURAL
TREATMENT DETAILS
NO.3" SHEET

RW3 OR
RW5 LOL

FG

GUTTER, Typ

SMOOTH CONCRETE, Typ

TOP OF ARCHITECTURAL TREATMENT,
SEE "ARCHITECTURAL TREATMENT
DETAILS NO. 1" SHEET

BRICK TEXTURE, Typ
SEE "ARCHITECTURAL
TREATMENT DETAILS
NO. 1" sheet

TOP OF SIDEWALK
SEE "ROADWAY PLANS"
FOR DETAILS

1'-0"
Typ

RW1 LOL

1"
Typ

SEE "DETAIL C"

CONCRETE BARRIER
TYPE 60D (MOD)

ROADWAY

PARTIAL TYPICAL SECTION

$\frac{3}{4}" = 1'-0"$

TOP OF
RETAINING WALL

RW1 LOL

1"
Typ

1"

2"

6"

8"

1"

1"

SMOOTH CONCRETE, Typ

DETAIL C

$\frac{3}{4}" = 1'-0"$



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

Richard Melko 05-30-12
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

DESIGN	BY I. TASABIA	CHECKED R. MELKO
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
ARCHITECTURAL TREATMENT DETAILS NO. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3

UNIT: 3591 CONTRACT NO.: 06-2HT201
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING
EARLIER REVISION DATES


REVISION DATES
05-28-12 05-28-12

SHEET OF
15 27

FILE => rw5-u-archd+02.dgn

USERNAME => s135425 DATE PLOTTED => 30-MAY-2012 TIME PLOTTED => 15:13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

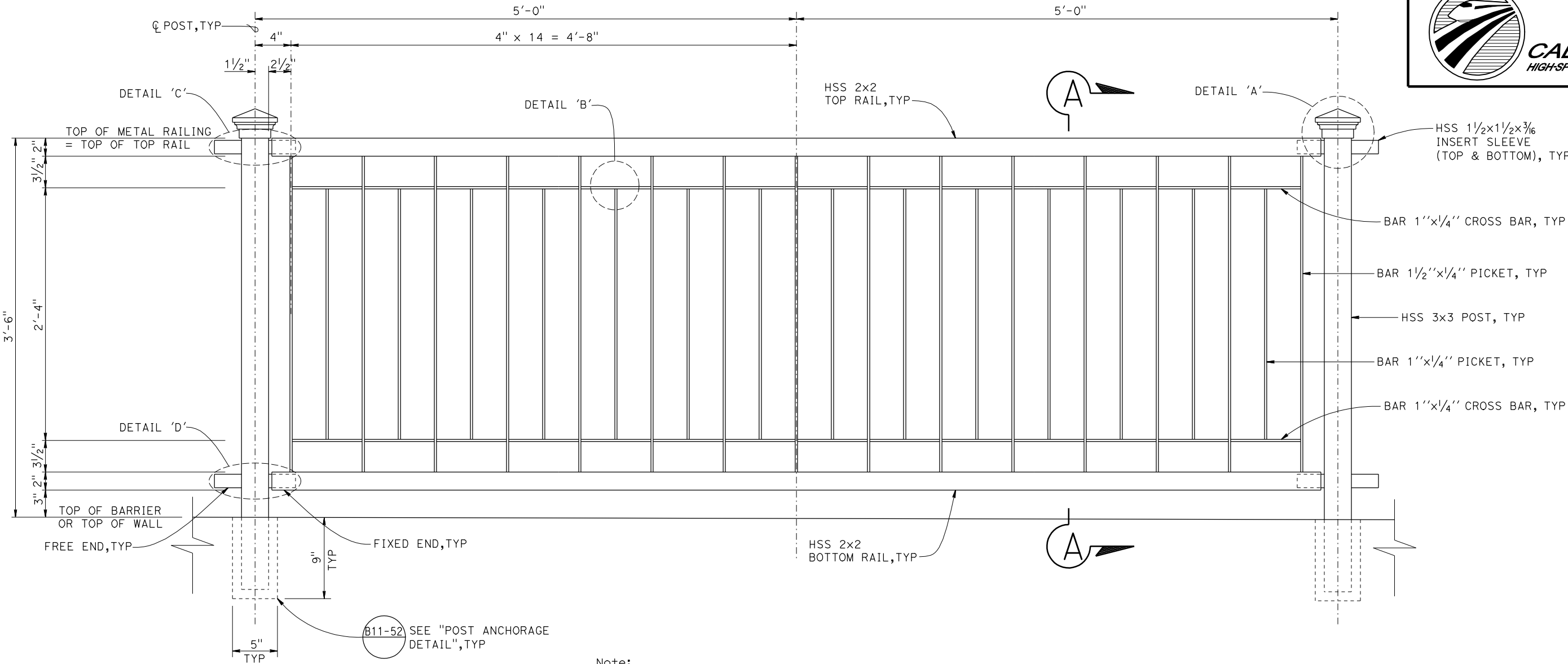


05-30-12
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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Note:
For Section A-A and Detail 'A', 'B', 'C' & 'D',
see "ARCHITECTURAL TREATMENT DETAILS NO. 4" sheet.

PARTIAL ELEVATION - METAL PICKET RAILING
2" = 1'-0"

DESIGN	BY I. TASABIA	CHECKED R. MELKO
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
X
POST MILE
X

RETAINING WALL NO. 1, 3, 5
ARCHITECTURAL TREATMENT DETAILS NO. 3

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3

UNIT: 3591 CONTRACT NO.: 06-2HT201
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

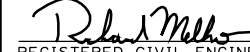
REVISION DATES

SHEET
16 OF
27

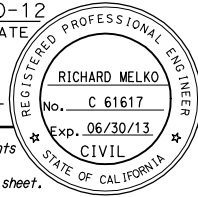
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USERNAME => s135425 DATE PLOTTED => 30-MAY-2012 TIME PLOTTED => 15:13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Fre				




05-30-12
REGISTERED CIVIL ENGINEER DATE

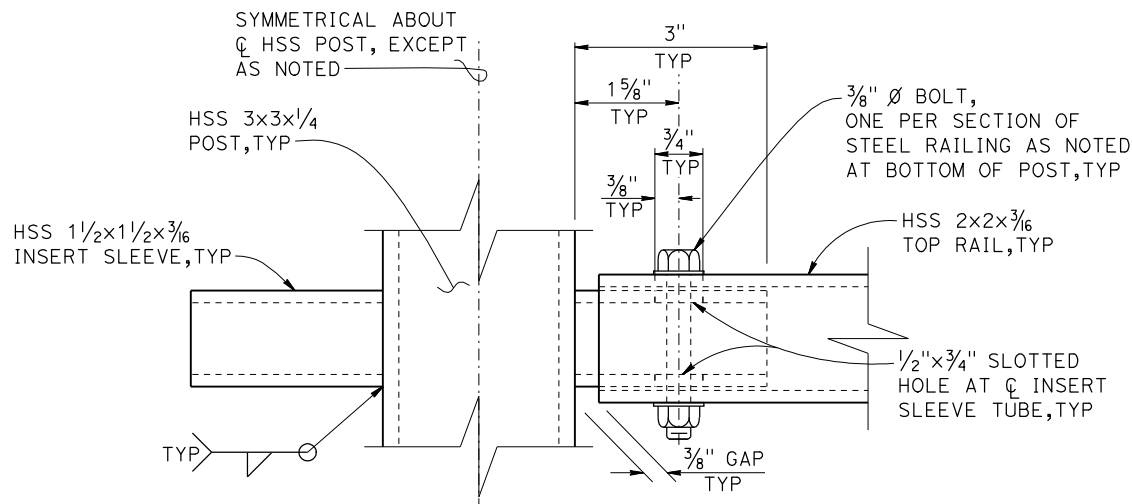
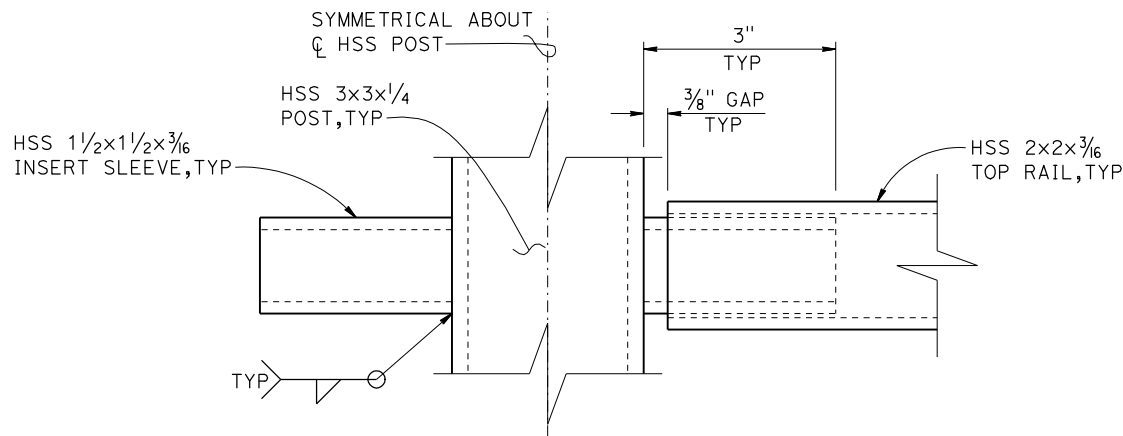
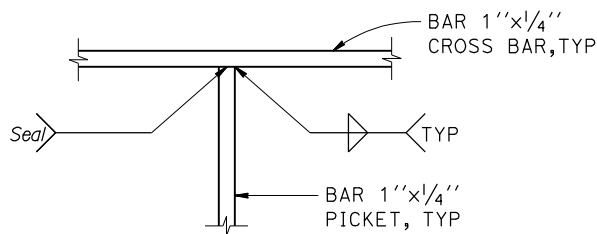
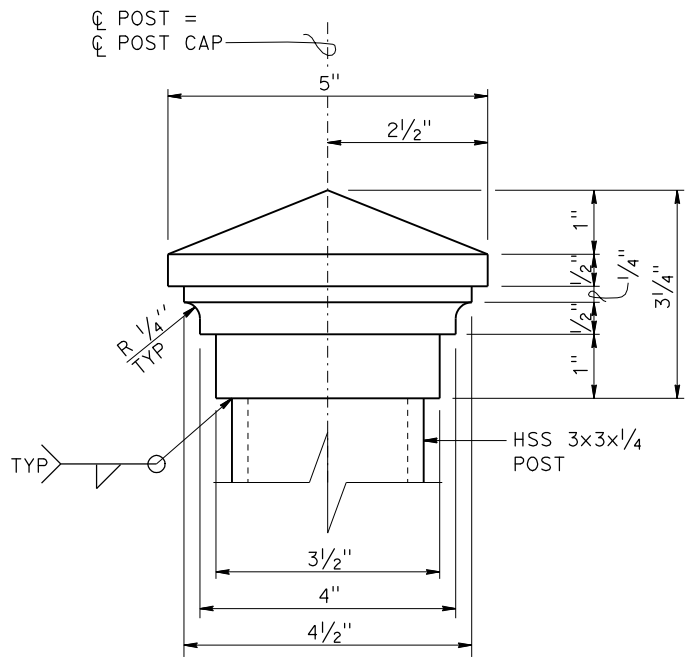
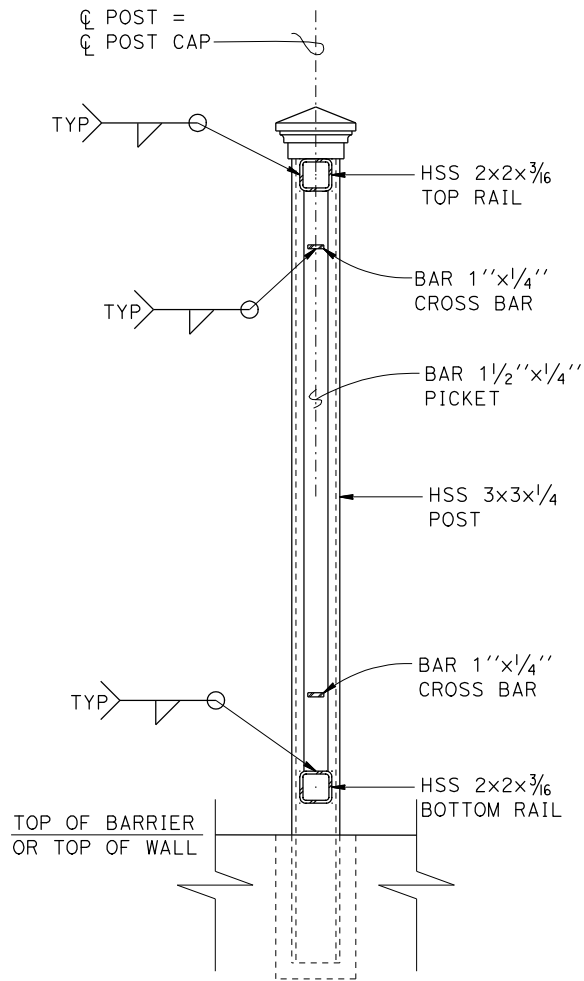


PLANS APPROVAL DATE

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



- Notes:
1. Embed post into post cap 1 1/2" minimum.
 2. Post cap fabrication by the Contractor as approved by the Engineer. Minimum material thickness 3/16".
 3. Post cap may be modified or substituted with pre-manufactured post cap by the Contractor as approved by the Engineer.
 4. Paint after fabrication.
 5. Posts shall be vertical, typical.
 6. The "Fixed End" of each metal picket railing section has one bolt at the bottom rail. The "Free End" does not have a bolt at the top or bottom rail, typical.
 7. Omit Insert Sleeve on the outside of each end post.

DESIGN	BY I. TASABIA	CHECKED R. MELKO
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
X
POST MILE
X

RETAINING WALL NO. 1, 3, 5
ARCHITECTURAL TREATMENT DETAILS NO. 4

DIST06COUNTYFreROUTEXPOST MILESTOTAL PROJECTTOTAL SHEETS

05-30-12

REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617


Exp. 06/30/13

CIVIL

STATE OF CALIFORNIA

PLANS APPROVAL DATE

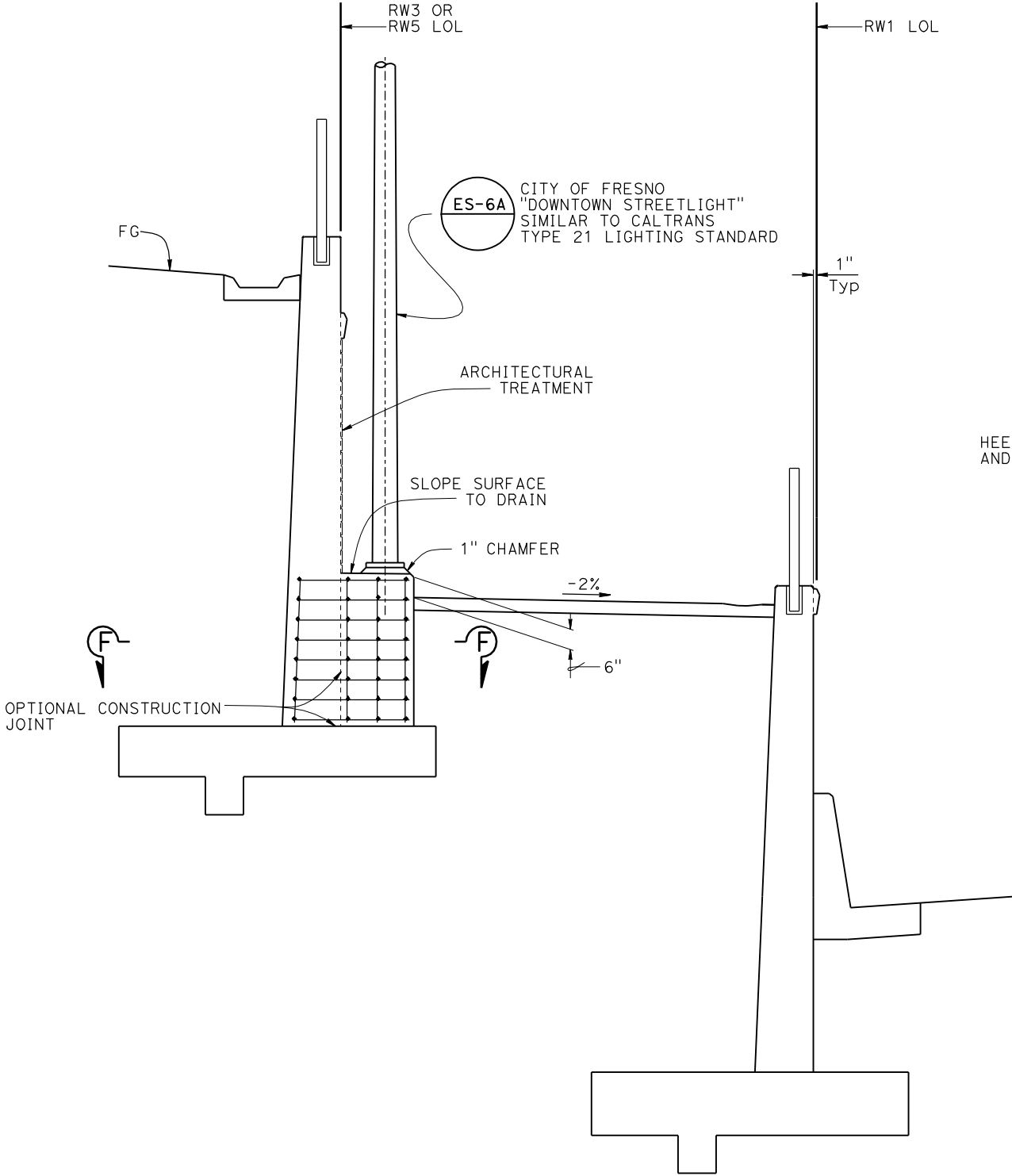
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

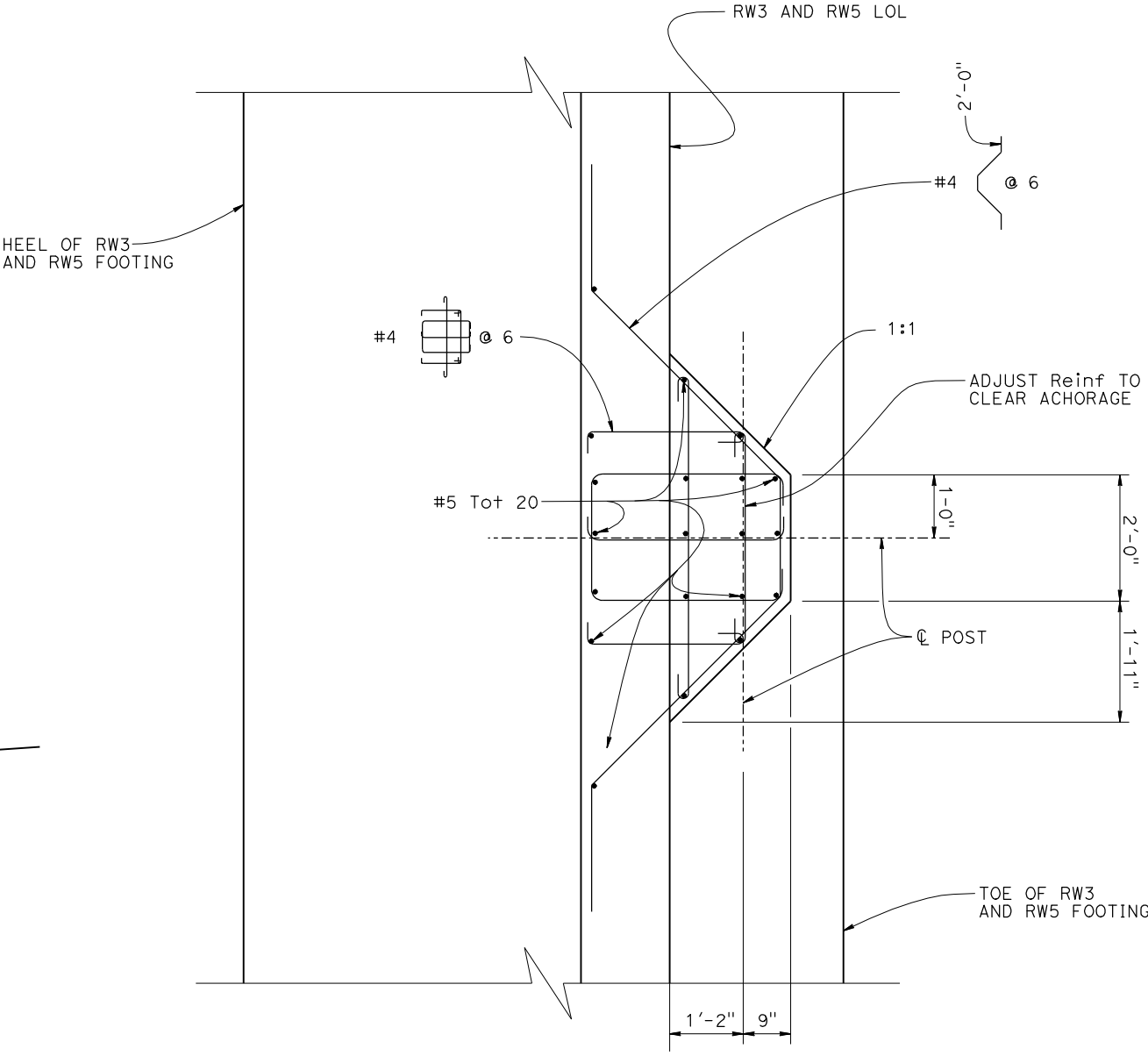
- NOTES:
- Reinforcing steel shown is in addition to retaining wall reinforcing steel not shown.
 - Mounting bracket shown and pedestal design are based on Caltrans Type 21 Lighting Standard. For non-similar Lighting Standards and mountings, pedestal design shall be re-evaluated.
 - See "ROAD PLANS" for streetlight locations.
 - For details not shown, see

RSP
B3-1A

ES-6A



TYPICAL SECTION
1/2" = 1'-0"



SECTION F-F
3/4" = 1'-0"

DESIGN	BY R. MELKO	CHECKED F. HOFFMAN
DETAILS	BY K. CHONKRIA	CHECKED R. MELKO
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

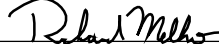
STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
X
POST MILE
X

RETAINING WALL NO. 1, 3, 5
LIGHTING SYSTEM DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

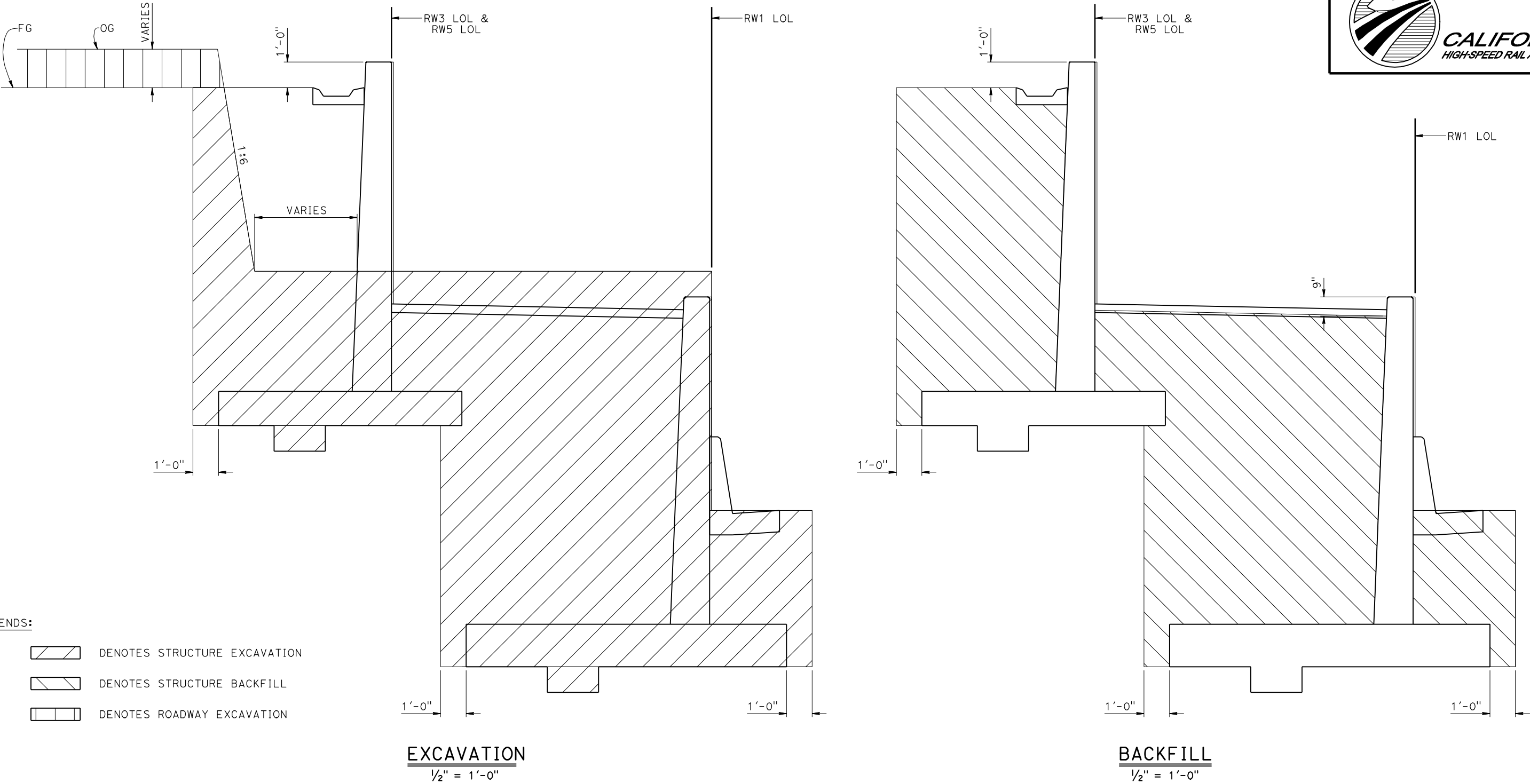


05-30-12
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

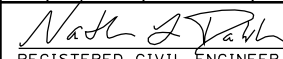
PLANS APPROVAL DATE

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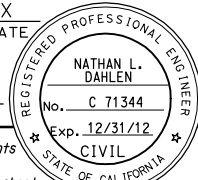


STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5							
	DETAILS	BY K. CHONKRIA	CHECKED R. MELKO			X	EXCAVATION AND BACKFILL DETAILS							
	QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED S. MORIMOTO			POST MILE								
						X								
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET	OF	
				0 1 2 3				05-08-12 05-18-12 05-29-12				19	27	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

X
DATE



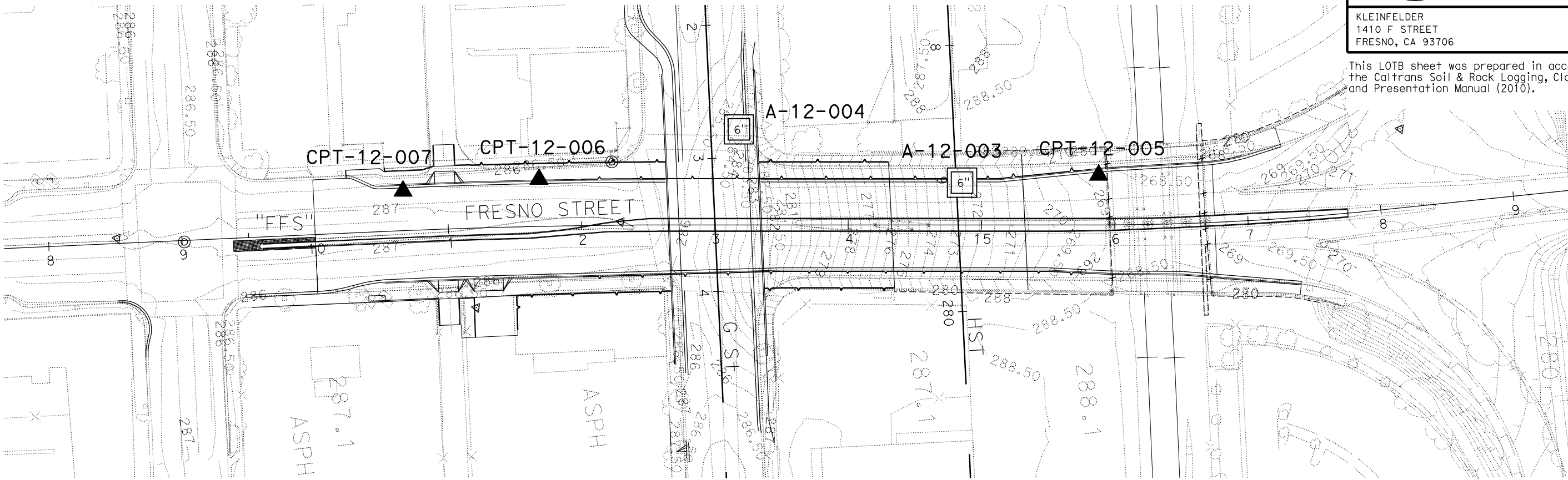
PLANS APPROVAL DATE

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KLEINFELDER
1410 F STREET
FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).



BENCHMARKS

PLAN
1"=40'

Note:
1. - Marl M-10 truck mounted rig with automatic hammer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

4-SON-116 FILE 01 OF 03
PHOTO ASC: 0820-17 PHOTO DATE: 10-23-07 PHOTO SCALE 1:3000
MAP ASC: 0820-17 MAP COMPLETION DATE: 3-31-08
FILENAME: 408217e0501.dgn
DIGITAL COMPILATION BY:
RADMAN AERIAL SURVEYS

VERTICAL DATUM: NAVD 1988
COORDINATE SYSTEM: CCS 83 (1991.35) ZONE 2
UNITS: US SURVEY FEET MAP SCALE 1"= 50' CONTOUR INTERVAL: 1'
DESIGN PLANE: 32R GO= 6065251.6352,1767251.6352,-214748.3648

DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

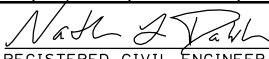
BRIDGE NO.
POST MILE

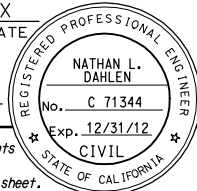
RETAINING WALL NO. 1, 3, 5

LOG OF TEST BORINGS 1 OF 8

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER X
DATE

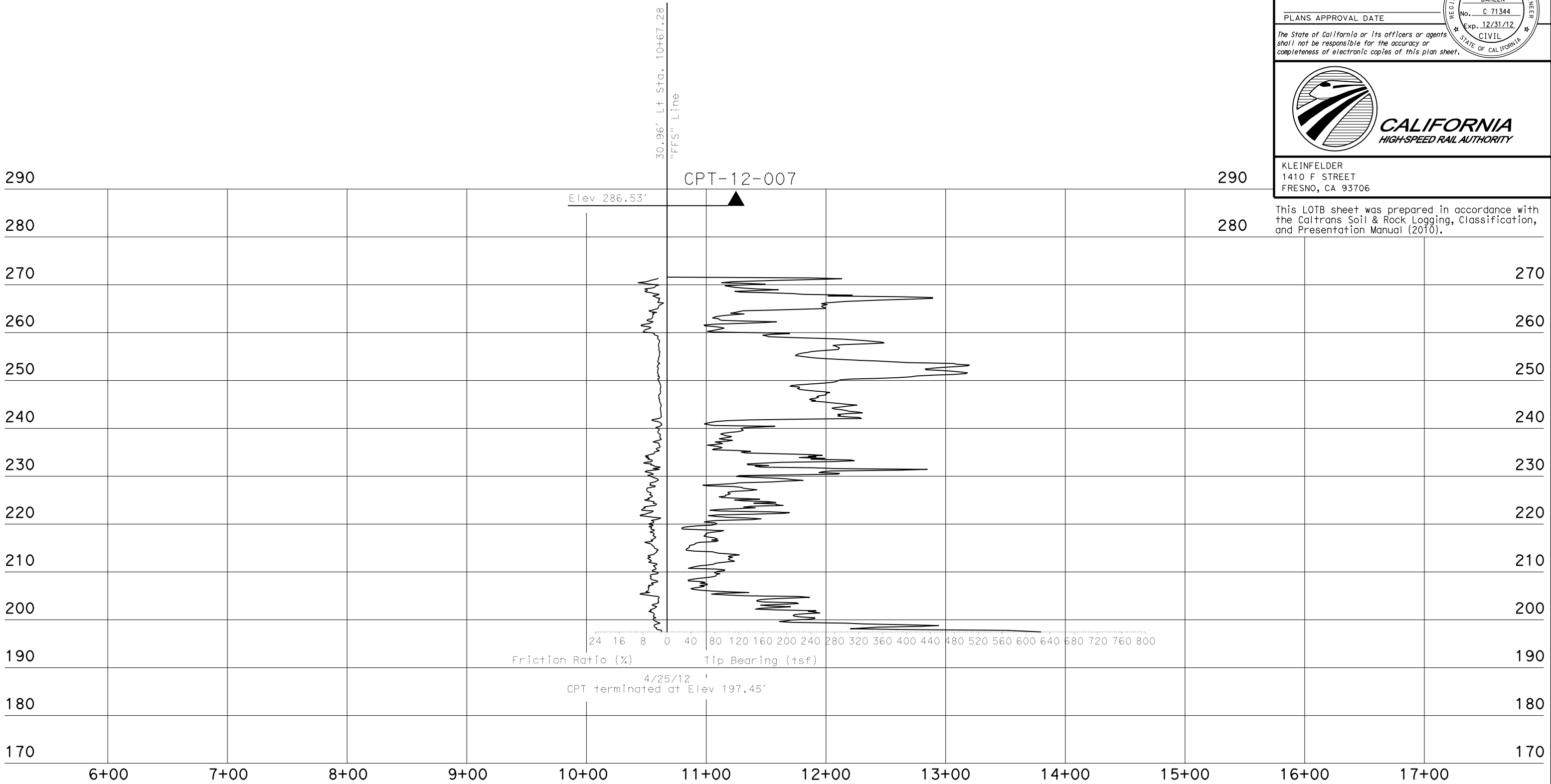


PLANS APPROVAL DATE

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**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY

KLEINFELDER
1410 F STREET
FRESNO, CA 93706



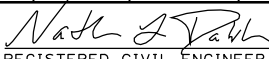
PROFILE
HOR. 1"=40'
VER. 1"=10'

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5	
	DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN			POST MILE		LOG OF TEST BORINGS 2 OF 8
	QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3591 CONTRACT NO.: 06-2HT01 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 21	

FILE => rw5-z-1tb02.dgn

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



REGISTERED CIVIL ENGINEER

X
DATE

REGISTERED PROFESSIONAL ENGINEER
NATHAN L. DAHLEN
No. C 71344
Exp. 12/31/12
CIVIL
STATE OF CALIFORNIA

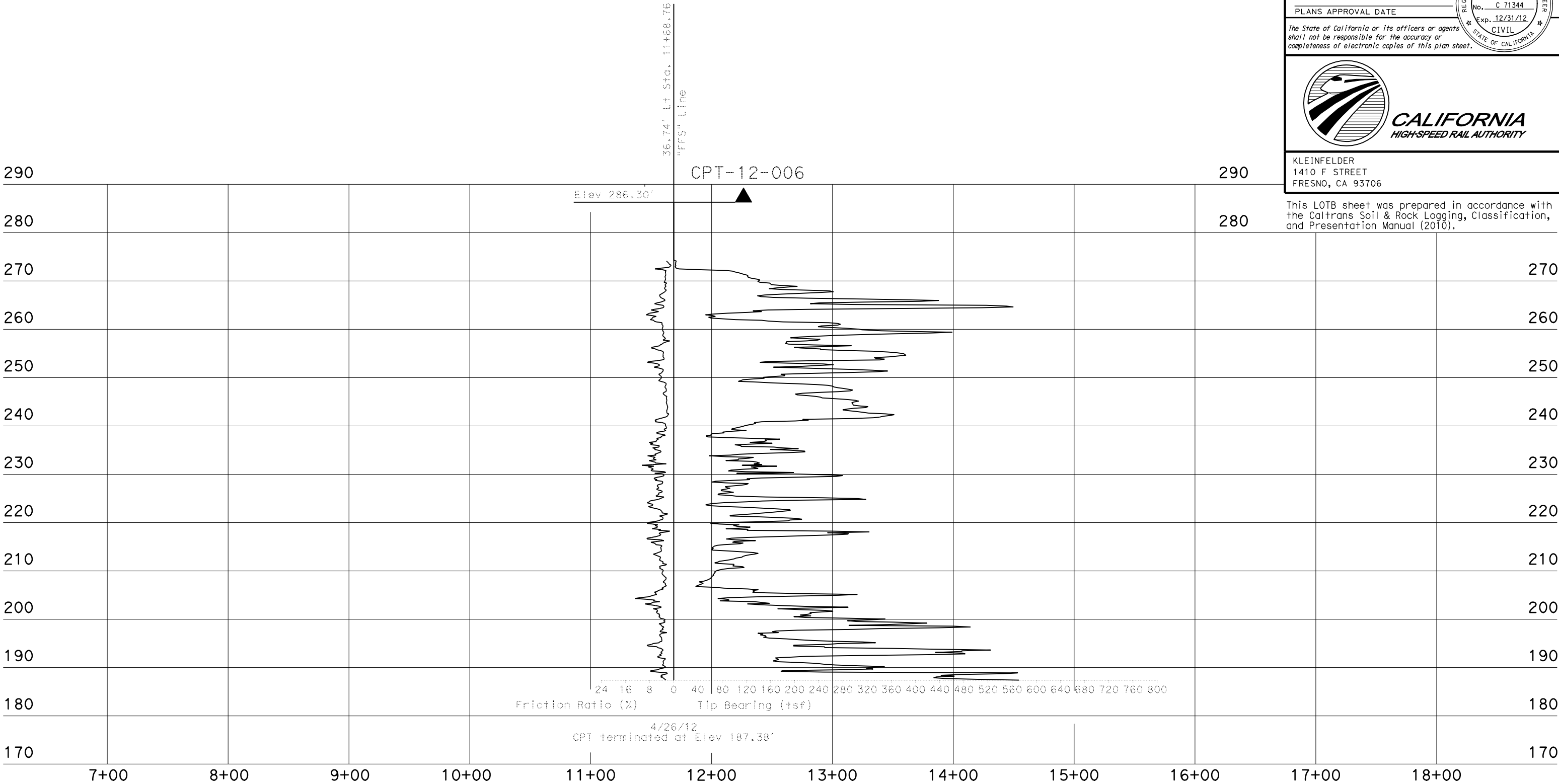
PLANS APPROVAL DATE

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**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY

KLEINFELDER
1410 F STREET
FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).



PROFILE
HOR. 1"=40'
VER. 1"=10'

DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
LOG OF TEST BORINGS 3 OF 8

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8

DIST06COUNTYFreROUTEPOST MILESTOTAL PROJECTTOTAL SHEETS

Nathan L. Dahlen

REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER

NATHAN L. DAHLEN

No. C 71344

Exp. 12/31/12

CIVIL

STATE OF CALIFORNIA

PLANS APPROVAL DATE

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CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

KLEINFELDER

1410 F STREET

FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

71.73' Lt Sta. 13+17.95
"FFS" Line

A-12-004

Elev 284.29' 6"

300 290 280 270 260 250 240 230 220 210 200 190 180 170

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

PROFILE
HOR. 1"=40'
VER. 1"=10'

5-1-12
Terminated at Elev 182.79'
ER_i = 74.3%

17 2.5 C M UW
85 1.4 PI
55 2.5 DS M UW
15 1.4
33 2.5 M UW
56 1.4 SA
55 2.5 DS M UW
56 1.4 SA
53 2.5 M UW PI
37 1.4 SA
62 2.5 DS M UW
65 1.4 SA
73 2.5 CR M UW
72 1.4 SA
51 2.5 M UW
50/5 1.4 SA
52 2.5 M UW
50/5 1.4 SA
61 2.5 CR M UW
37 1.4 SA

Silty SAND (SM): dense, brown, moist, coarse to fine grained
Sandy SILT (ML): very dense, dark brown, moist, fine grained
-PP>=4.5 tsf
Silty SAND (SM): very dense, brown, moist, medium to fine grained
Poorly Graded SAND (SP): dense, yellow brown, moist, coarse to fine grained
Sandy SILT (ML): very dense, gray, moist, coarse to fine grained
-PP>=4.5 tsf
Poorly Graded SAND (SP): very dense, yellow brown, moist, coarse to fine grained
Sandy SILT (ML): very dense, dark red brown, moist, fine to medium grained
-PP>=4.5 tsf
SILT (ML): very stiff, gray to red brown, moist
-PP>=4.5 tsf
Silty SAND (SM): dense, gray brown, moist, coarse to fine grained
SILT with SAND (ML): very dense, gray brown, moist, fine grained, trace of clay
-PP>=4.5 tsf
-PP=4 tsf
Silty SAND (SM): very dense, red brown, moist, medium to fine grained
-PP>=4.5 tsf
-trace of clay, PP=2 tsf
Poorly Graded SAND (SP): very dense, yellow brown, moist, coarse to fine grained
Sandy SILT (ML): very dense, gray brown, moist, fine grained
-PP=3.5 tsf
Poorly Graded SAND (SP): very dense, yellow brown, moist, coarse to fine grained
Sandy SILT (ML): very dense, gray brown, moist, fine grained
-PP>=4.5 tsf
-PP>=4.5 tsf
Poorly Graded SAND (SP): dense, gray, moist, coarse to fine grained

DESIGN	BY	M.G. REYES-GUTIERREZ	CHECKED	D. ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 1, 3, 5 LOG OF TEST BORINGS 4 OF 8			
	DETAILS	BY	A. SANCHEZ	CHECKED			N. DAHLEN		POST MILE		
	QUANTITIES	BY	M.G. REYES-GUTIERREZ	CHECKED			R. WASHINGTON				
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 23 OF 27

FILE => rw5-z-ltb04.dgn

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8

DIST06COUNTYFreROUTEPOST MILESTOTAL PROJECTTOTAL SHEETS

Nathan L. Dahlen

REGISTERED CIVIL ENGINEER

X

DATE

REGISTERED PROFESSIONAL ENGINEER

NATHAN L. DAHLEN

No. C 71344

Exp. 12/31/12

CIVIL

PLANS APPROVAL DATE

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CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

KLEINFELDER

1410 F STREET

FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

290290

280280

270270

260260

250250

240240

230230

220220

210210

200200

190190

180180

170170

160160

150150

31.77' Lt Sta. 14+85.41

"FFS" Line

A-12-003

Elev 272.41'

6"

35 1.4

44 2.5

32 1.4

37 2.5

44 1.4

61 2.5

48 1.4

38 2.5

65 1.4

41 2.5

49 1.4

78 2.5

47 1.4

50/5 2.5

69 1.4

68 2.5

50 1.4

50/5 2.5

39 1.4

50/4 2.5

CR

SA

C M UW

SA

DS M UW

SA

DS M UW

PI

DS M UW

M UW

SA

CR M UW

SA

M UW

SA

M UW

SA

CR

M UW

Silty SAND (SM): dense, brown, moist, coarse to fine grained

SILT (ML): dense, gray brown, moist

-PP=3.5 tsf

Silty SAND (SM): dense, brown, moist, medium to fine grained

-PP=3.5 tsf

Sandy SILT (ML): very dense, red brown, moist, fine grained

-PP>=4.5 tsf

SILT (ML): very stiff, gray brown, moist

-PP>=4.5 tsf

-trace of clay, PP=3 tsf

-PP>=4.5 tsf

Sandy SILT (ML): dense, red brown, moist, medium to fine grained

-PP>=4.5 tsf

-PP>=4.5 tsf

SILT (ML): very stiff, red brown, moist, trace of clay

-PP>=4.5 tsf

Silty SAND (SM): dense, red brown, moist, coarse to fine grained, trace of clay

SILT (ML): very stiff, gray, moist

-PP>=4.5 tsf

-PP>=4.5 tsf

Sandy SILT (ML): very dense, light brown, moist, medium to fine grained

-PP>=4.5 tsf

SILT with SAND (ML):very dense, gray brown, moist, fine grained, trace of clay

-PP>=4.5 tsf

-PP>=4.5 tsf

Silty SAND (SM): very dense, gray brown, moist, fine grained

-dense

Poorly Graded SAND (SP): very dense, brown, moist, coarse to fine grained, PP=3 tsf

5-2-12

Terminated at Elev 170.91

ER_i = 74.3%

11+0012+0013+0014+0015+0016+0017+0018+0019+0020+0021+0022+00

PROFILE
HOR. 1"=40'
VER. 1"=10'

DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
LOG OF TEST BORINGS 5 OF 8

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0123

UNIT: 3591 CONTRACT NO.: 06-2HT201
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

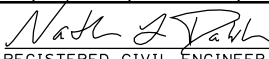
REVISION DATES

SHEET 24 OF 27

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FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

X
DATE

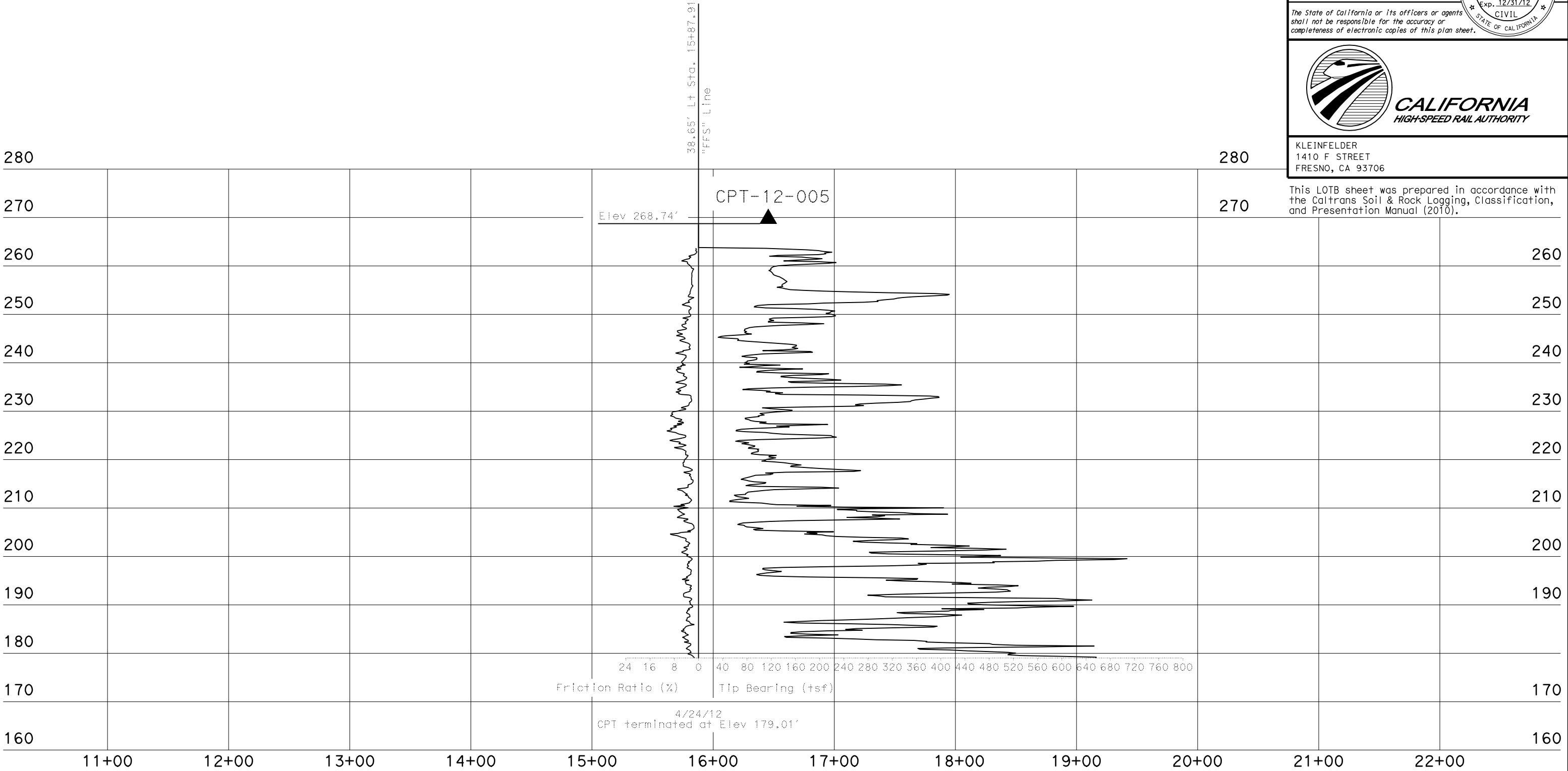
REGISTERED PROFESSIONAL ENGINEER
NATHAN L. DAHLEN
No. C 71344
Exp. 12/31/12
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY

KLEINFELDER
1410 F STREET
FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).



PROFILE

HOR. 1"=40'
VER. 1"=10'

DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
LOG OF TEST BORINGS 6 OF 8

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

Nathan L. Dahlen X
REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
NATHAN L. DAHLEN
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STATE OF CALIFORNIA



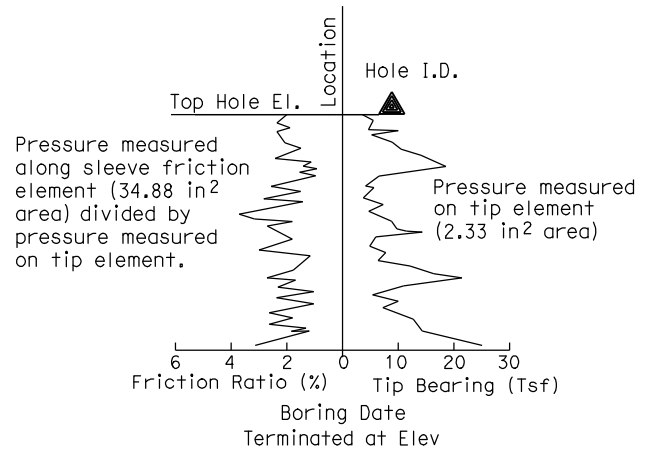
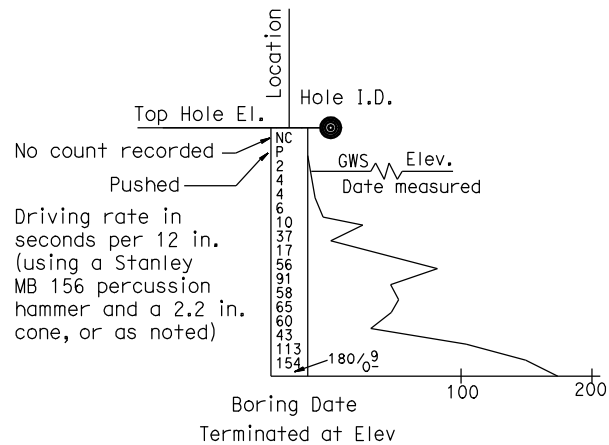
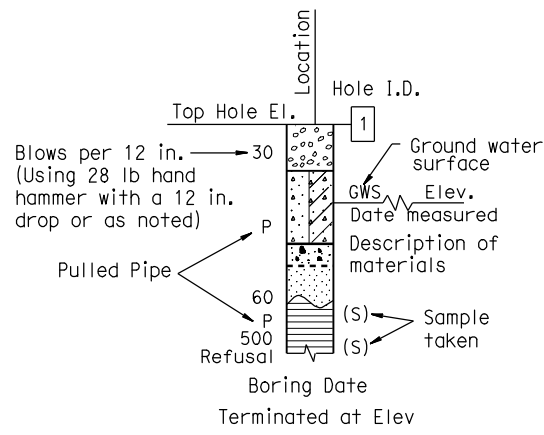
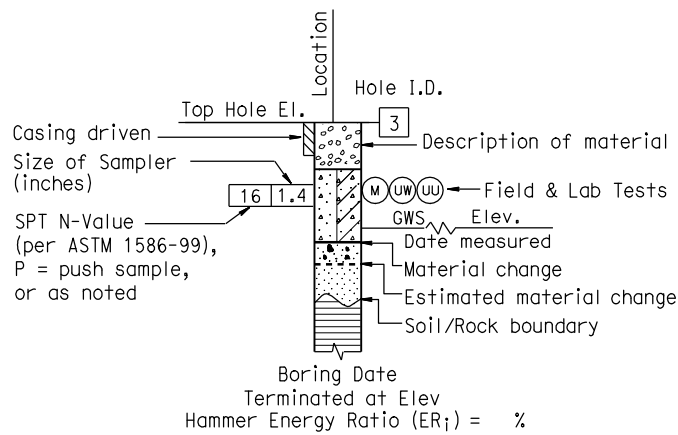
KLEINFELDER
1410 F STREET
FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778)
	O	Other (note on LOTB)
<p>Note: Size in inches.</p>		

Consistency of Cohesive Soils				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6**

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5

LOG OF TEST BORINGS 7 OF 8

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

UNIT: 3591 CONTRACT NO.: 06-2HT201
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING
EARLIER REVISION DATES -





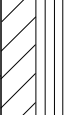




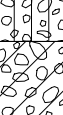



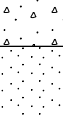

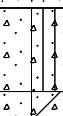

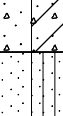
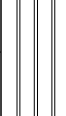



REVISION DATES				SHEET	OF
				26	27

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

GROUP SYMBOLS AND NAMES					
Graphic/Symbol		Group Names	Graphic/Symbol		Group Names
	GW	Well-graded GRAVEL Well-graded GRAVEL with SAND		CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
	GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND			
	GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND		CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
	GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)			
	GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND		ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
	GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)			
	GM	SILTY GRAVEL SILTY GRAVEL with SAND		OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
	GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND			
	GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND		OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
	SW	Well-graded SAND Well-graded SAND with GRAVEL			
	SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL		CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
	SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL			
	SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
	SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL			
	SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
	SM	SILTY SAND SILTY SAND with GRAVEL			
	SC	CLAYEY SAND CLAYEY SAND with GRAVEL		OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
	SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL			
	PT	PEAT		OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
		COBBLES COBBLES and BOULDERS BOULDERS			

FIELD AND LABORATORY TESTING	
	Consolidation (ASTM D 2435)
	Collapse Potential (ASTM D 5333)
	Compaction Curve (ASTM D 1557)
	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
	Consolidated Undrained Triaxial (ASTM D 4767)
	Direct Shear (ASTM D 3080)
	Expansion Index (ASTM D 4829)
	Moisture Content (ASTM D 2216)
	Organic Content-% (ASTM D 2974)
	Permeability (CTM 220)
	Particle Size Analysis (ASTM D 422)
	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
	Point Load Index (ASTM D 5731)
	Pressure Meter
	R-Value (CTM 301)
	Sand Equivalent (CTM 217)
	Specific Gravity (AASHTO T 100)
	Shrinkage Limit (ASTM D 427)
	Swell Potential (ASTM D 4546)
	Unconfined Compression-Soil (ASTM D 2166)
	Unconfined Compression-Rock (ASTM D 2938)
	Unconsolidated Undrained Triaxial (ASTM D 2850)
	Unit Weight (ASTM D 4767)

DIST06COUNTYFreROUTEPOST MILESTOTAL PROJECTTOTAL SHEETS

REGISTERED CIVIL ENGINEER

X

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

NATHAN L. DAHLEN

No. C 71344

Exp. 12/31/12

CIVIL

STATE OF CALIFORNIA

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

KLEINFELDER

1410 F STREET

FRESNO, CA 93706

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N ₆₀ (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE	
Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE		
Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

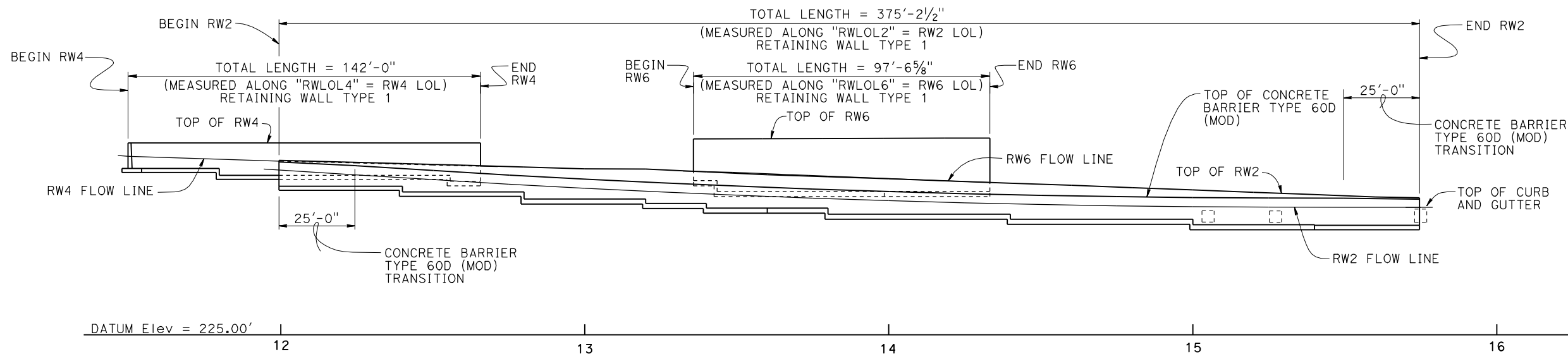
DESIGN	BY M.G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY A. SANCHEZ	CHECKED N. DAHLEN
QUANTITIES	BY M.G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 1, 3, 5
LOG OF TEST BORINGS 8 OF 8

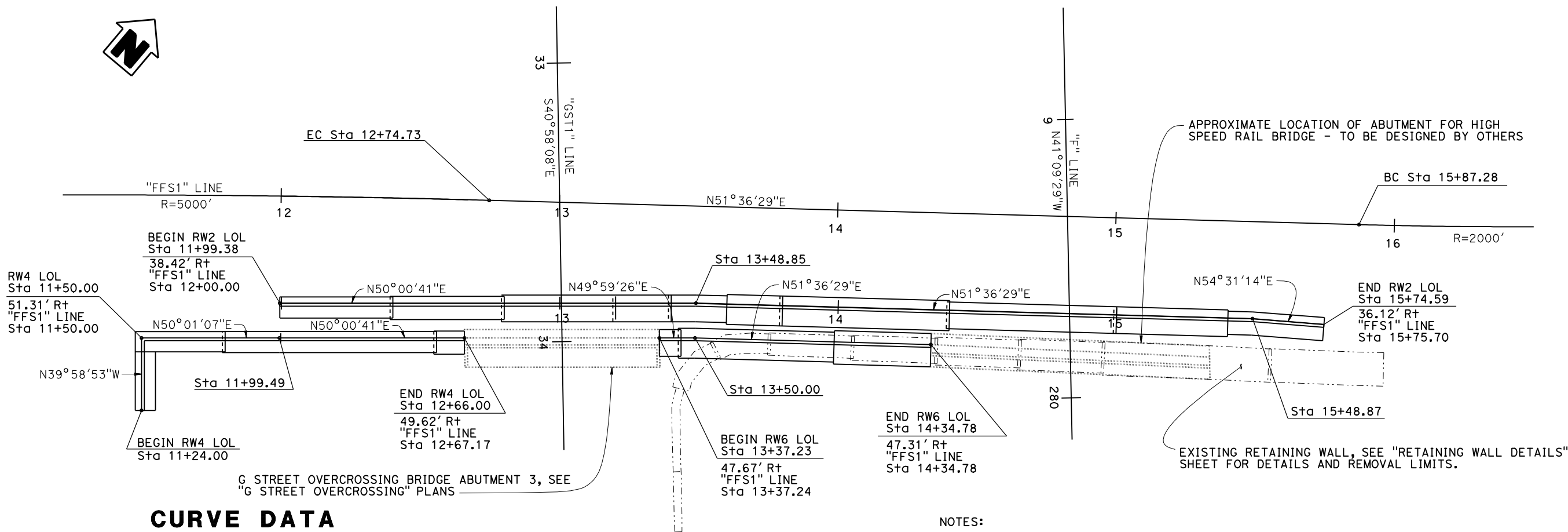


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

REGISTERED CIVIL ENGINEER
DATE: 5-30-12
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE: _____

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CURVE DATA

LOCATION	R	Δ	T	L
"FFS1"	5000.00'	2°34'01"	112.02'	224.01'
"FFS1"	2000.00'	5°55'10"	103.41'	206.63'

PLAN
1" = 20'

NOTES:

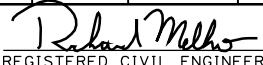
1. For TYPICAL SECTION, see "GENERAL PLAN NO. 2" sheet.
2. For "GENERAL NOTES", and "STANDARD PLANS" list, see "INDEX TO PLANS" sheet.
3. Architectural Treatment and Metal Picket railing not shown, see "ARCHITECTURAL TREATMENT DETAILS" sheets.
4. For Concrete Barrier Type 60D (Mod) transition, see "BARRIER TRANSITION DETAILS" sheet.

FRITZ HOFFMAN DESIGN ENGINEER	DESIGN	BY G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2,4,6 GENERAL PLAN NO. 1		
	DETAILS	BY D. ELLIOTT	CHECKED R. MELKO	LAYOUT	BY D. ELLIOTT			CHECKED G. REYES-GUTIERREZ		POST MILE	
	QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON	SPECIFICATIONS	BY V. RENGANATHAN			CHECKED X			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3594 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 27

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



5-30-12
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617


Exp. 06/30/13

CIVIL

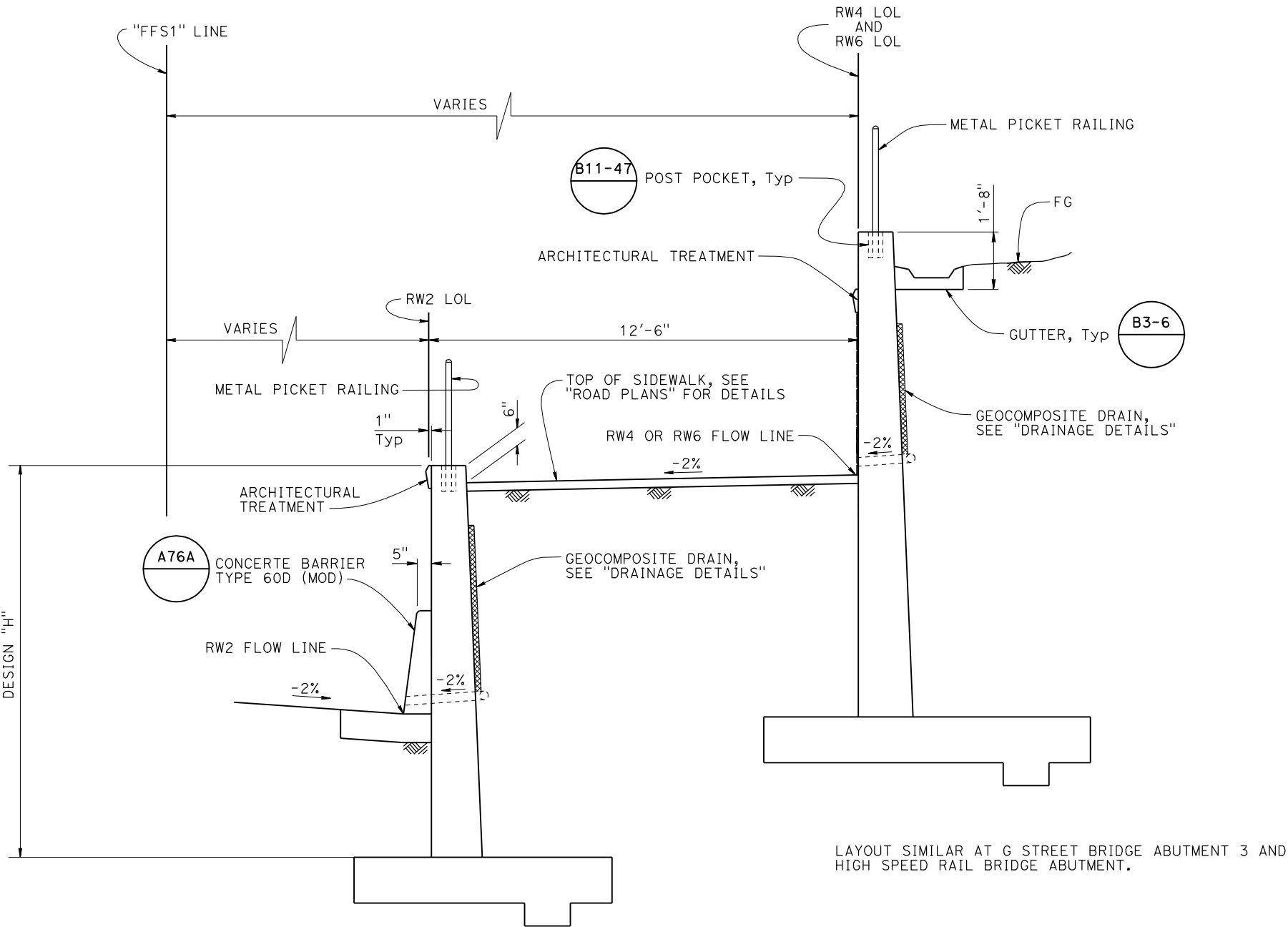
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



TYPICAL SECTION
1/2" = 1'-0"

- NOTE:
- 1. For "ARCHITECTURAL TREATMENT" and "METAL PICKET RAILING", see "ARCHITECTURAL TREATMENT" sheets.
 - 2. For "GEOCOMPOSITE DRAIN", see "DRAINAGE DETAILS" sheet.
 - 3. For "CONCRETE BARRIER TYPE 60D (MOD)", see "ROAD PLANS".

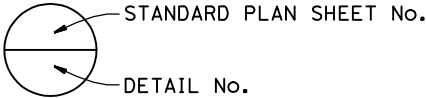
FRITZ HOFFMAN DESIGN ENGINEER	DESIGN	BY G. REYES-GUTIERREZ	CHECKED D. ALVAREZ	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2,4,6									
	DETAILS	BY D. ELLIOTT	CHECKED R. MELKO	LAYOUT	BY D. ELLIOTT	CHECKED G. REYES-GUTIERREZ			POST MILE	GENERAL PLAN NO. 2									
	QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON	SPECIFICATIONS	BY V. RENGANATHAN	PLANS AND SPECS COMPARED X													
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0	1	2	3	UNIT: 3594 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET	OF
														5-26-12		5-29-12		2	27

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN NO. 1
2.	GENERAL PLAN NO. 2
3.	INDEX TO PLAN
4.	FOUNDATION PLAN
5.	RETAINING WALL 2 LAYOUT NO. 1
6.	RETAINING WALL 2 LAYOUT NO. 2
7.	RETAINING WALL 2 LAYOUT NO. 3
8.	RETAINING WALL 4 LAYOUT
9.	RETAINING WALL 6 LAYOUT
10.	RETAINING WALL DETAILS
11.	DRAINAGE DETAILS
12.	BARRIER TRANSITION DETAILS
13.	ARCHITECTURAL TREATMENT DETAILS NO. 1
14.	ARCHITECTURAL TREATMENT DETAILS NO. 2
15.	ARCHITECTURAL TREATMENT DETAILS NO. 3
16.	ARCHITECTURAL TREATMENT DETAILS NO. 4
17.	ARCHITECTURAL TREATMENT DETAILS NO. 5
18.	LIGHTING SYSTEM DETAILS
19.	STRUCTURE EXCAVATION AND BACKFILL DETAILS
20.	LOG OF TEST BORINGS 1 OF 8
21.	LOG OF TEST BORINGS 2 OF 8
22.	LOG OF TEST BORINGS 3 OF 8
23.	LOG OF TEST BORINGS 4 OF 8
24.	LOG OF TEST BORINGS 5 OF 8
25.	LOG OF TEST BORINGS 6 OF 8
26.	LOG OF TEST BORINGS 7 OF 8
27.	LOG OF TEST BORINGS 8 OF 8

STANDARD PLANS DATED MAY 2010

A10A	ACRONYMS AND ABBREVIATIONS (A-L) (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z) (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
A76A	CONCRETE BARRIER TYPE 60D (MOD)
B0-3	BRIDGE DETAILS
RSP - B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP - B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
RSP - B11-47	CABLE RAILING
ES-1A	ELECTRICAL SYSTEMS (LEGEND, NOTES, AND ABBREVIATIONS)
ES-7M	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD DETAILS NO. 1)
ES-7N	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD DETAILS NO. 2)
ES-7O	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD DETAILS NO. 3)
ES-7R	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING MISCELLANEOUS ATTACHMENT)



GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications,4th edition and the California Amendments Preface dated, December 2011.

DEAD LOAD:
See Standard Plans RSP B3-1A.

LIVE LOAD SURCHARGE:
Varied surcharge on level ground surface.


SEISMIC:
Kh = 0.2 g Kv = 0

REINFORCED CONCRETE:
fy = 60 ksi
f'c = 3.6 ksi
n = 8

SOIL:
Φ = 34°, γ = 120 pcf

LOAD COMBINATIONS AND LIMITS STATES:
See Standard Plan RSP B3-1A.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



5-30-12
DATE

REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617


Exp. 06/30/13

CIVIL

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

DESIGN	BY G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
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STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE


RETAINING WALL NO. 2,4,6
INDEX TO PLAN

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

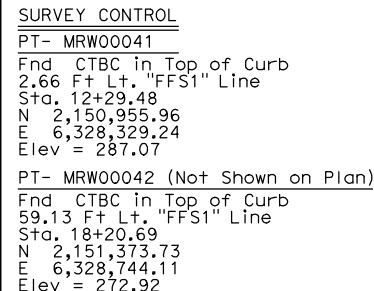
Richard Melko
 REGISTERED CIVIL ENGINEER

5-30-12
 DATE

PLANS APPROVAL DATE _____



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DESIGN	BY G. Reyes-Gutierrez	CHECKED D. ALVAREZ
DETAILS	BY D. Elliott	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

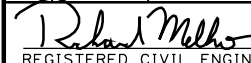
**DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6**

RETAINING WALL NO. 2,4,6
FOUNDATION PLAN

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3646 CONTRACT NO.: 06-2HT201 CHSTP CONTRACT NO. PROJECT NO. & PHASE: 0612000239-1 DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-28-12	5-29-12		5-16-12	4	X

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



5-30-12
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617

Exp. 06/30/13

CIVIL

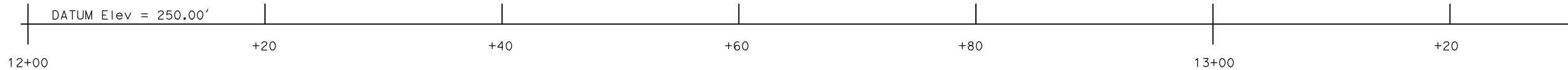
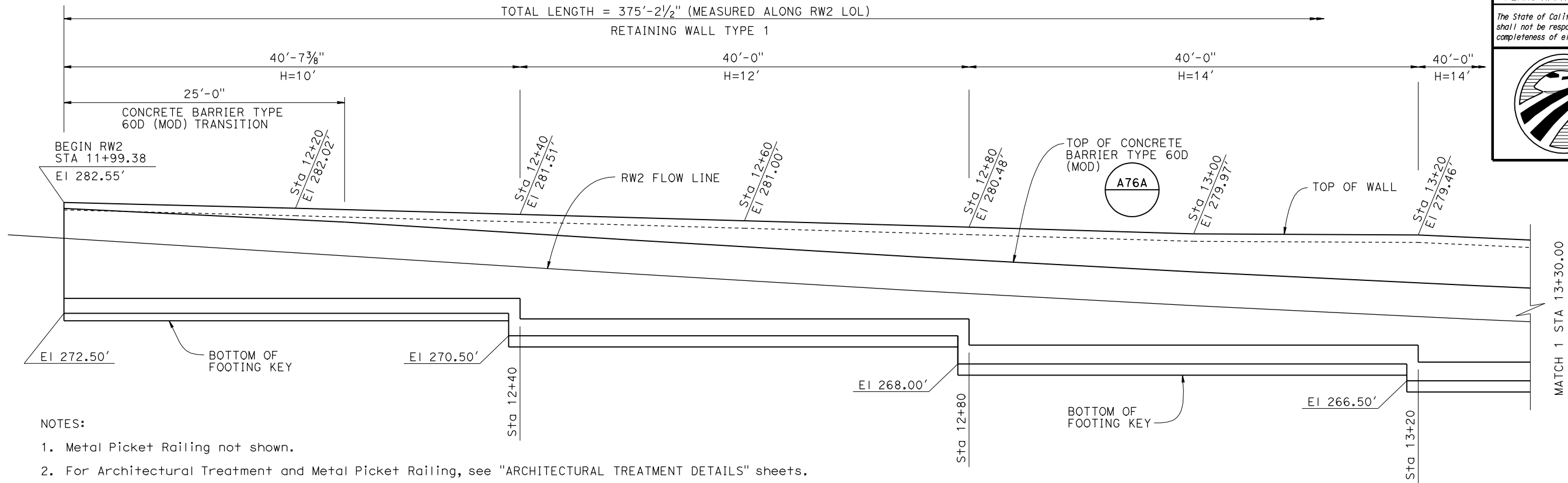
STATE OF CALIFORNIA

PLANS APPROVAL DATE

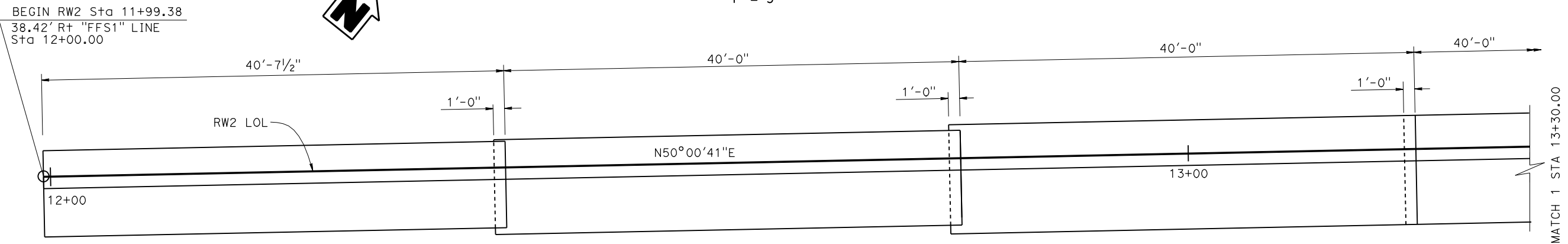
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



MIRRORED ELEVATION
1" = 5'



PLAN
1" = 5'

DESIGN	BY G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY D. ELLIOTT	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON


STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2,4,6
RETAINING WALL 2 LAYOUT NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



5-30-12
REGISTERED CIVIL ENGINEER DATE

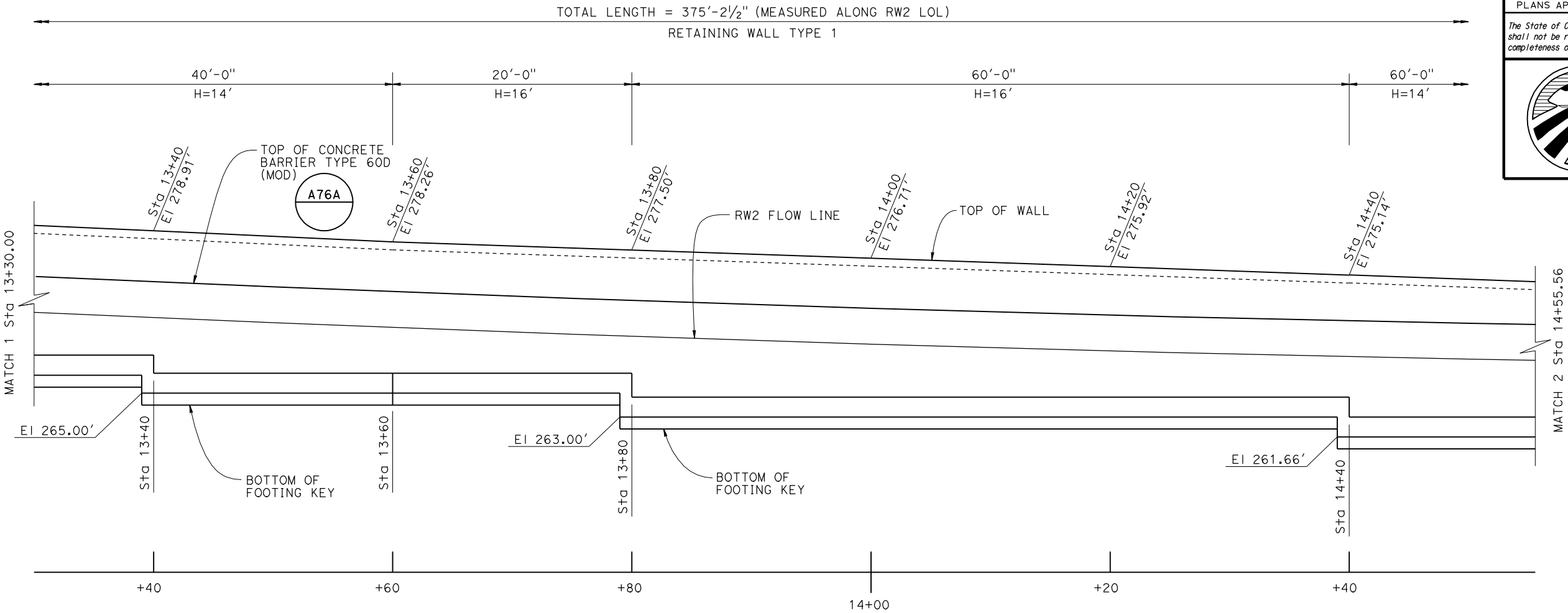
REGISTERED PROFESSIONAL ENGINEER
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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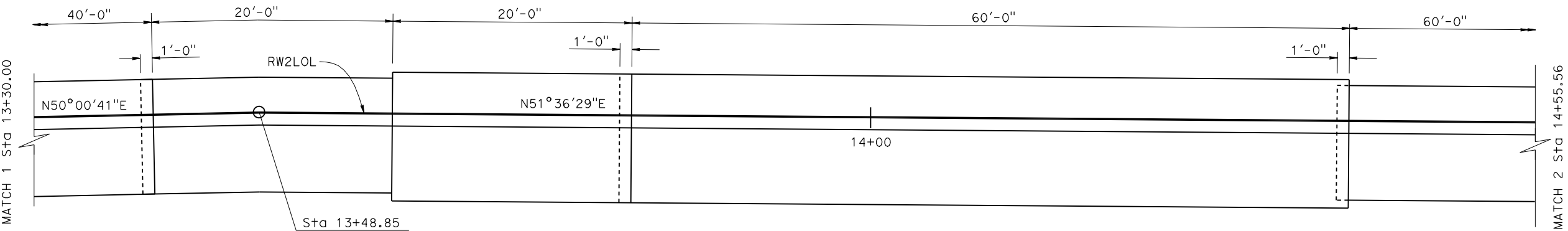


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



MIRRORED ELEVATION
1" = 5'

- NOTES:
1. Metal Picket Railing not shown.
 2. For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.



PLAN
1" = 5'

DESIGN	BY G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY D. ELLIOTT	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

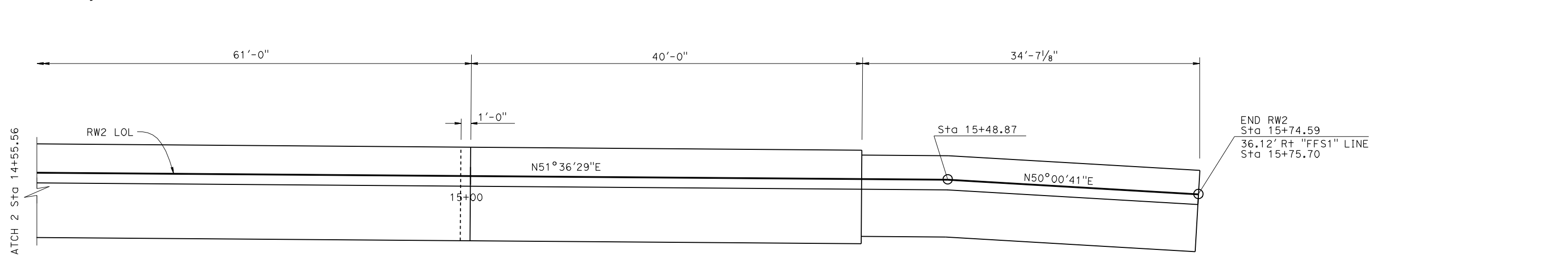
RETAINING WALL NO. 2, 4, 6
RETAINING WALL 2 LAYOUT NO. 2

Richard Melko
REGISTERED CIVIL ENGINEER 5-30-12 DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA



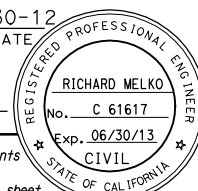
1. Metal Picket Railing not shown.
2. For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.
3. For Concrete Barrier Type 60D (Mod) Transition, see "BARRIER TRANSITION DETAILS" sheet.

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



5-30-12
REGISTERED CIVIL ENGINEER DATE

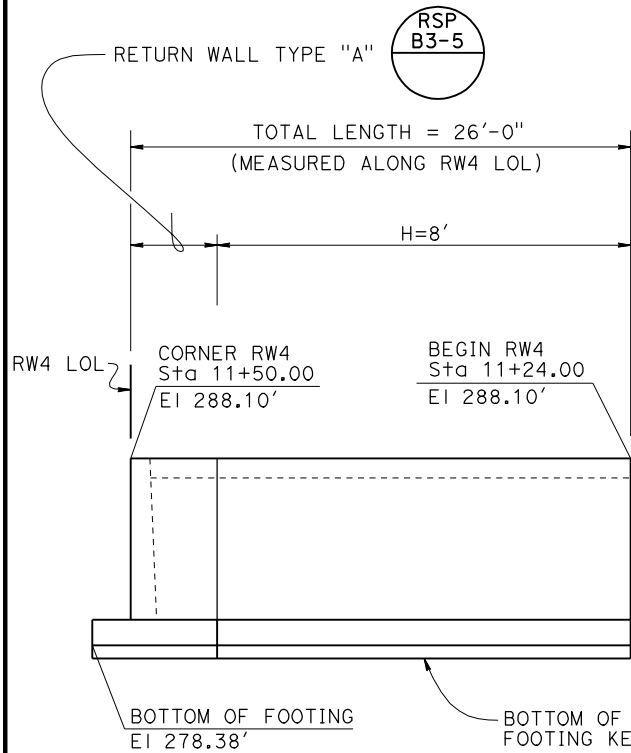


PLANS APPROVAL DATE

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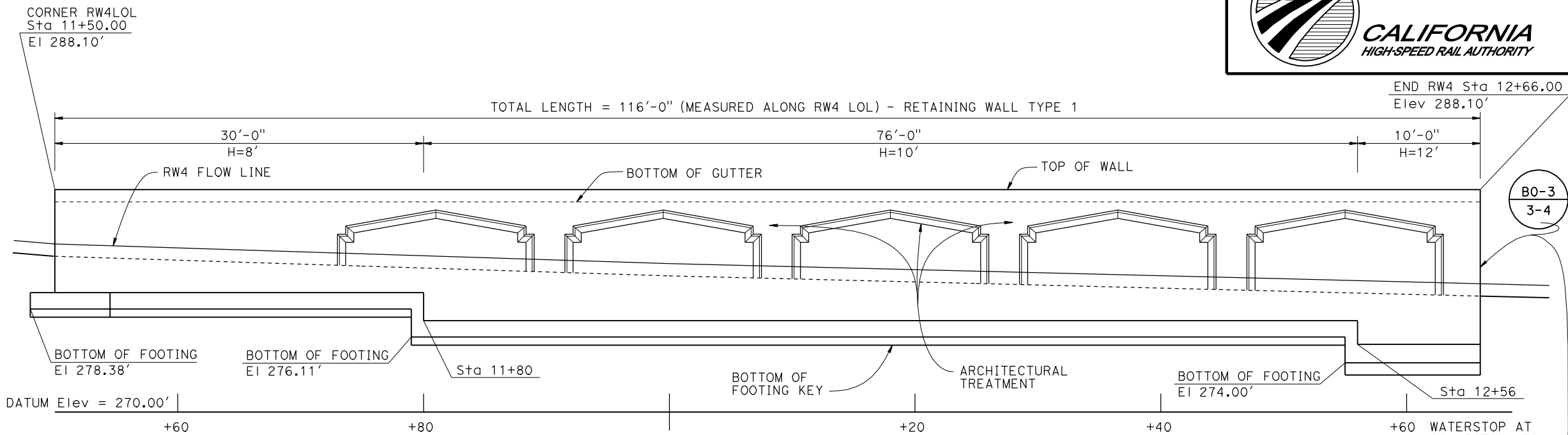


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



NOTES:

1. Metal Picket Railing not shown.
2. For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.



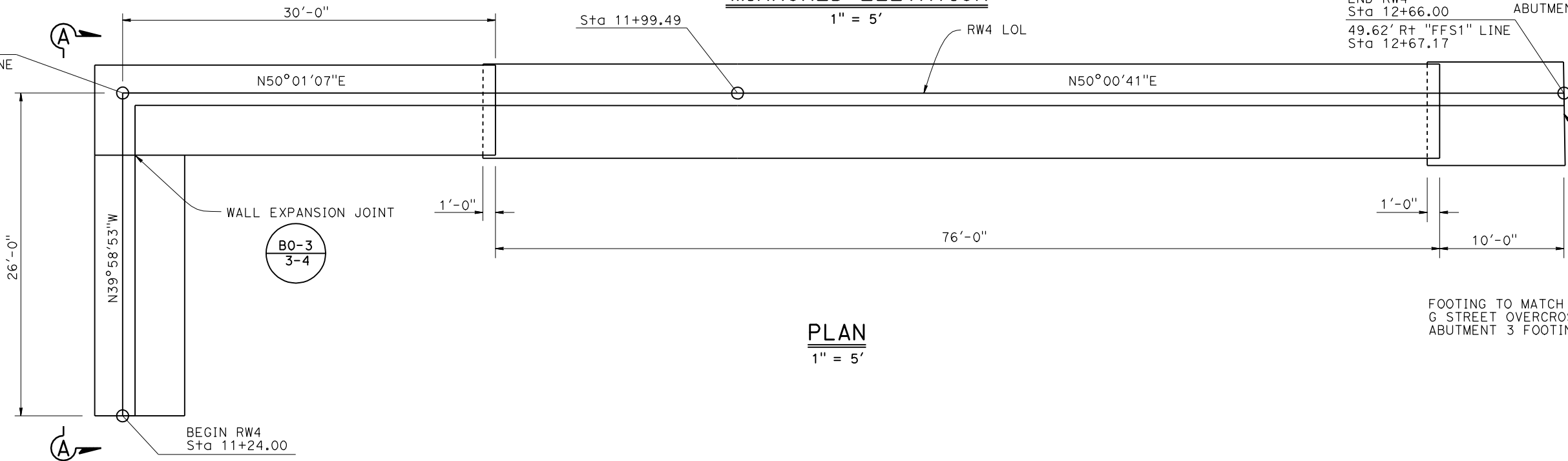
B0-3
3-4

VIEW A-A
1" = 5'

CORNER RW4
Sta 11+50.00
51.31' R+ "FFS1" LINE
Sta 11+50.00

MIRRORED ELEVATION
1" = 5'

END RW4
Sta 12+66.00
49.62' R+ "FFS1" LINE
Sta 12+67.17



FOOTING TO MATCH
G STREET OVERCROSSING
ABUTMENT 3 FOOTING

DESIGN	BY G. REYES-GUTIERREZ	CHECKED D. ALVAREZ
DETAILS	BY D. ELLIOTT	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

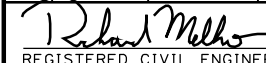
STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2, 4, 6
RETAINING WALL 4 LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

5-30-12
DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617

Exp. 06/30/13

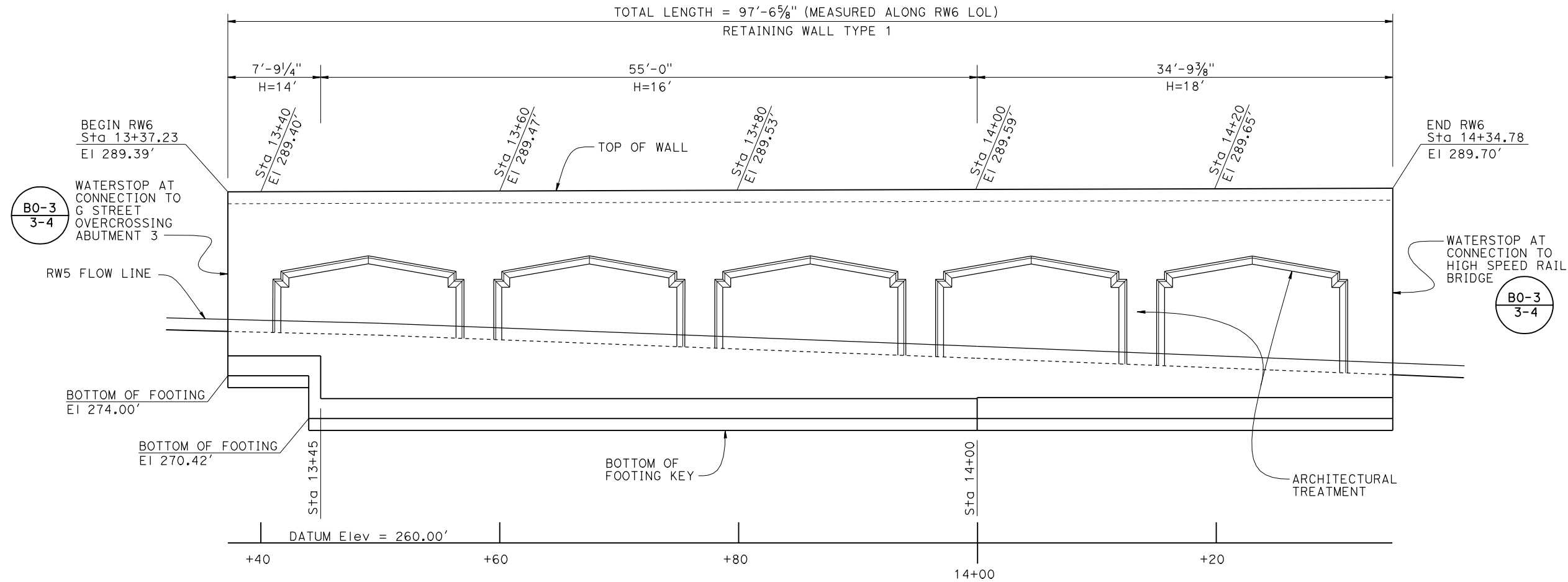
CIVIL

STATE OF CALIFORNIA

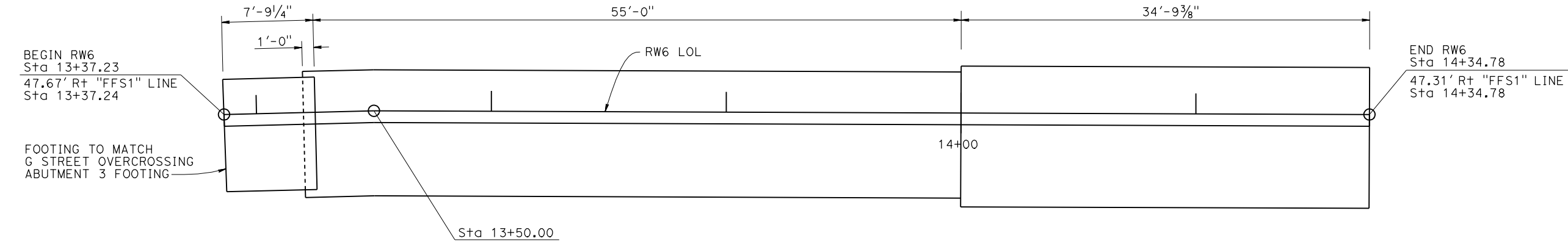
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



MIRRORED ELEVATION
1" = 5'



PLAN
1" = 5'

NOTES:

1. Metal Picket Railing not shown.
2. For Architectural Treatment and Metal Picket Railing, see "ARCHITECTURAL TREATMENT DETAILS" sheets.

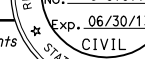
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DETAILS	BY D. ELLIOTT	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

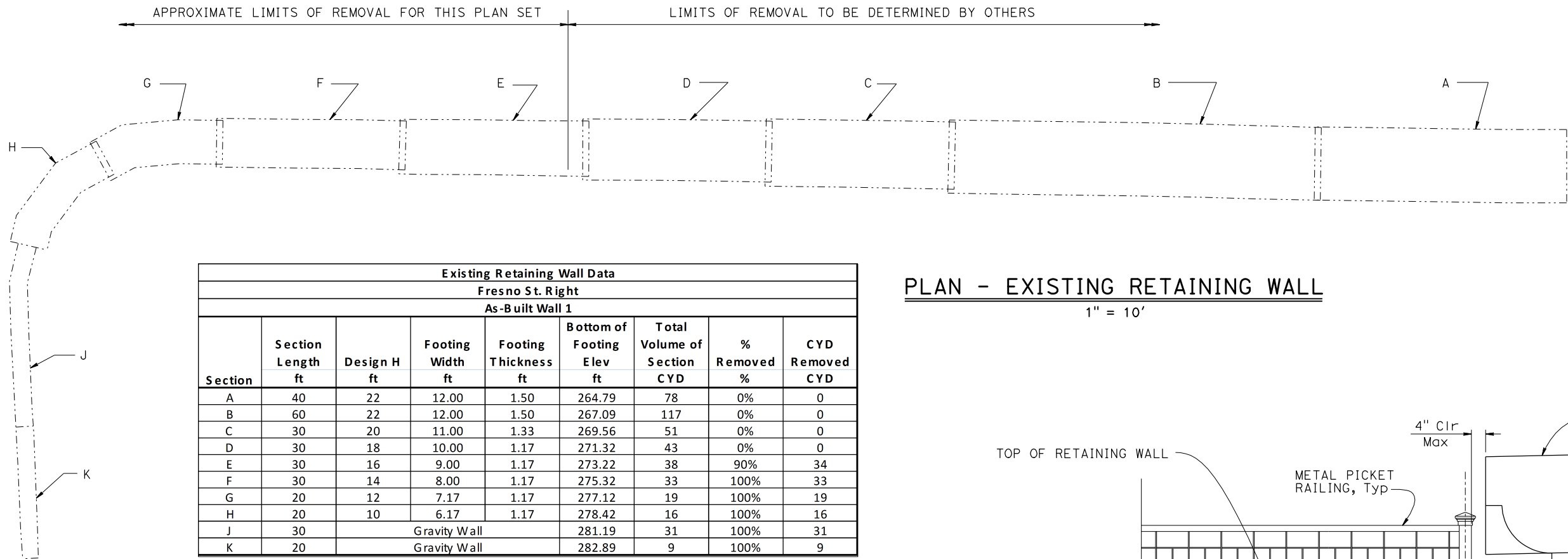
STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2, 4, 6
RETAINING WALL 6 LAYOUT


 5-30-12
 REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE
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$$1'' = 10'$$

Existing Retaining Wall Data								
Fresno St. Right								
As-Built Wall 1								
Section	Section Length	Design H	Footing Width	Footing Thickness	Bottom of Footing Elev	Total Volume of Section	% Removed	CYD Removed
	ft							
A	40	22	12.00	1.50	264.79	78	0%	0
B	60	22	12.00	1.50	267.09	117	0%	0
C	30	20	11.00	1.33	269.56	51	0%	0
D	30	18	10.00	1.17	271.32	43	0%	0
E	30	16	9.00	1.17	273.22	38	90%	34
F	30	14	8.00	1.17	275.32	33	100%	33
G	20	12	7.17	1.17	277.12	19	100%	19
H	20	10	6.17	1.17	278.42	16	100%	16
J	30	Gravity Wall			281.19	31	100%	31
K	20	Gravity Wall			282.89	9	100%	9

The diagram illustrates the cross-section of a gravity dam. Key design parameters are labeled as follows:

- DESIGN H**: The total height of the dam.
- 12:1 BATTER**: The slope of the upstream face, indicated by a dashed line and a label.
- 1'-0"**: The thickness of the dam at the top.
- FOOTING THICKNESS**: The thickness of the foundation at the base.
- FOOTING WIDTH**: The total width of the foundation at the base.

$$\frac{3}{8}'' = 1'-0''$$


No Scale

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2, 4, 6
RETAINING WALL DETAILS

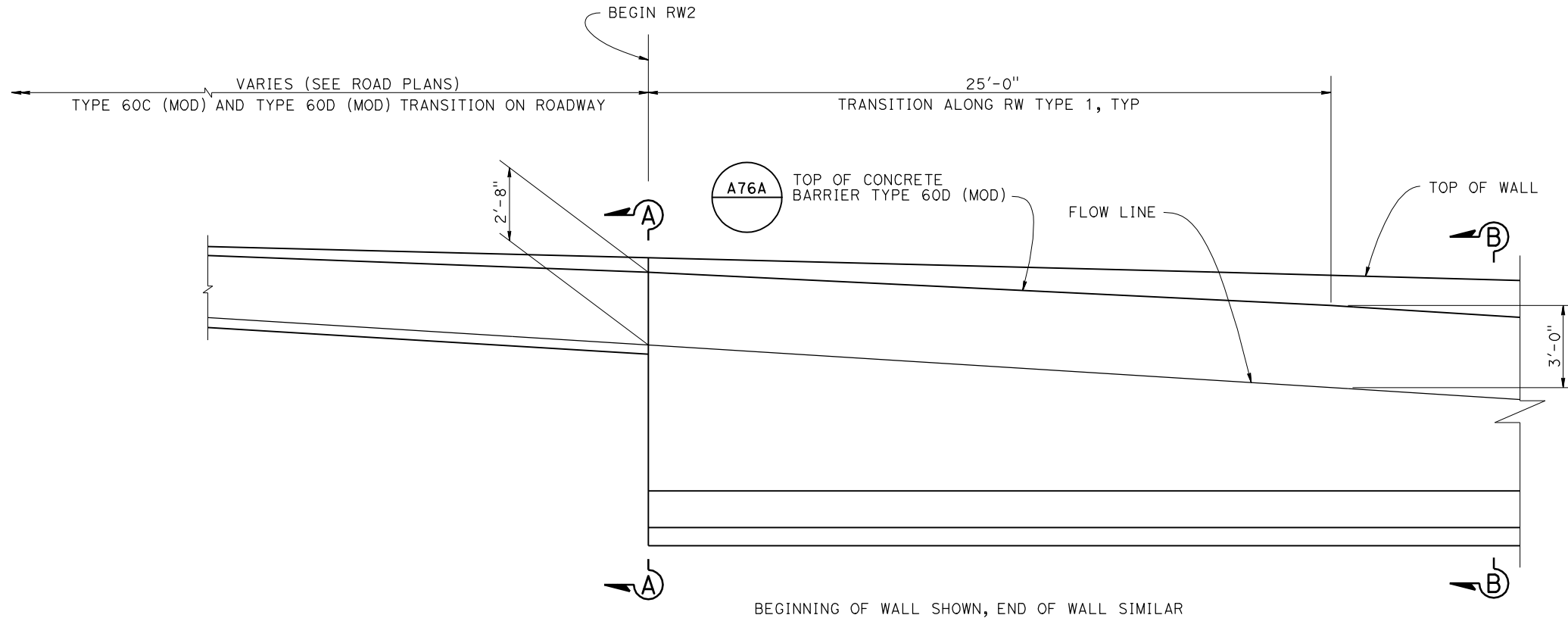
ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES				SHEET	OF
5-29-12				10	27

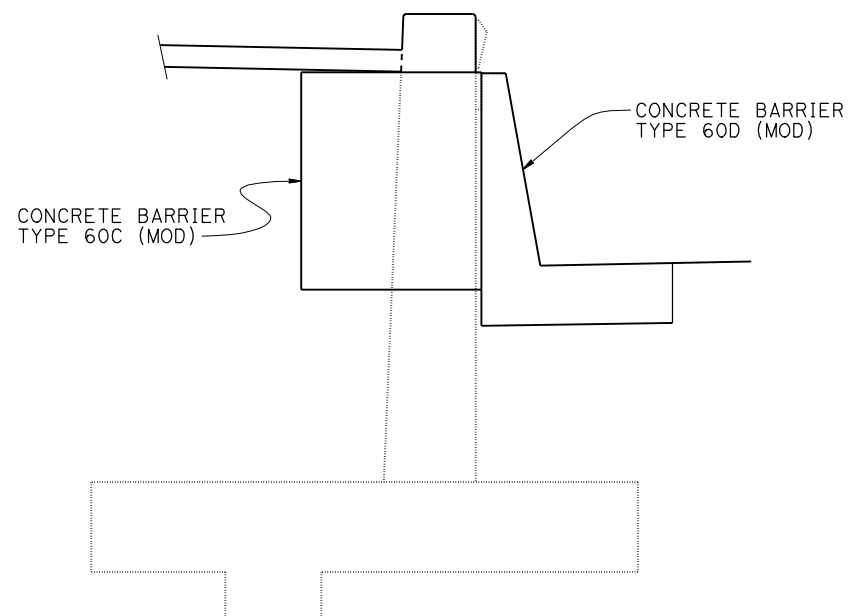
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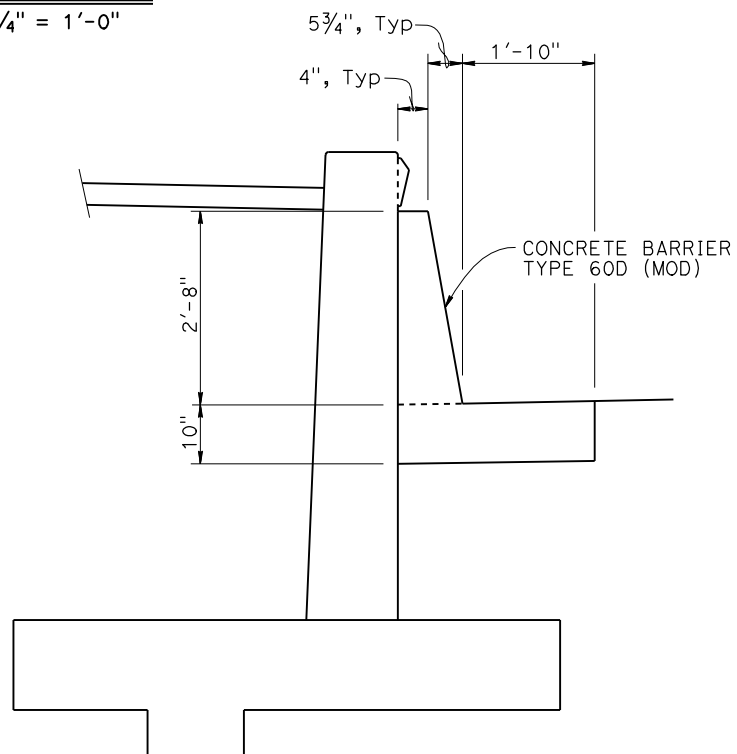
BEGINNING OF WALL SHOWN, END OF WALL SIMILAR

ELEVATION
1/4" = 1'-0"

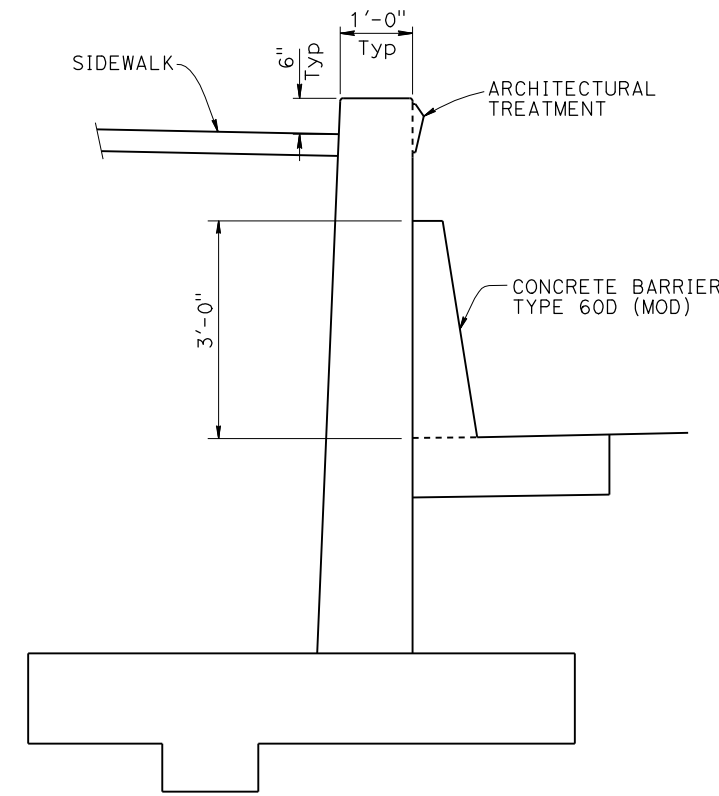


BEFORE RETAINING WALL, SEE "ROAD PLANS"

SECTION A-A
3/4" = 1'-0"



ON RETAINING WALL



SECTION B-B
3/4" = 1'-0"

NOTES:

1. For barrier transition on roadway details, see "ROAD PLANS".
2. For CONCRETE BARRIER TYPE 60D (MOD) details, see "ROAD PLANS".

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

5-30-12
REGISTERED CIVIL ENGINEER DATE

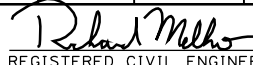
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

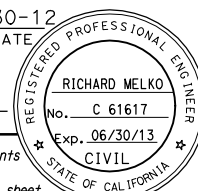
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

5-30-12
DATE

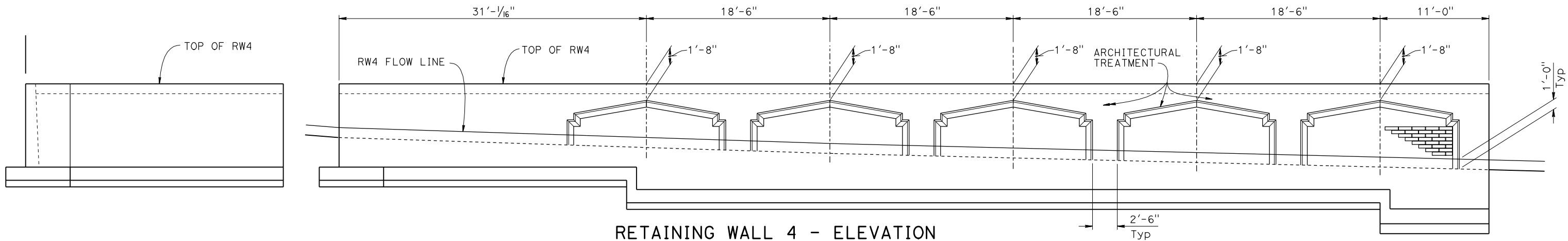


PLANS APPROVAL DATE



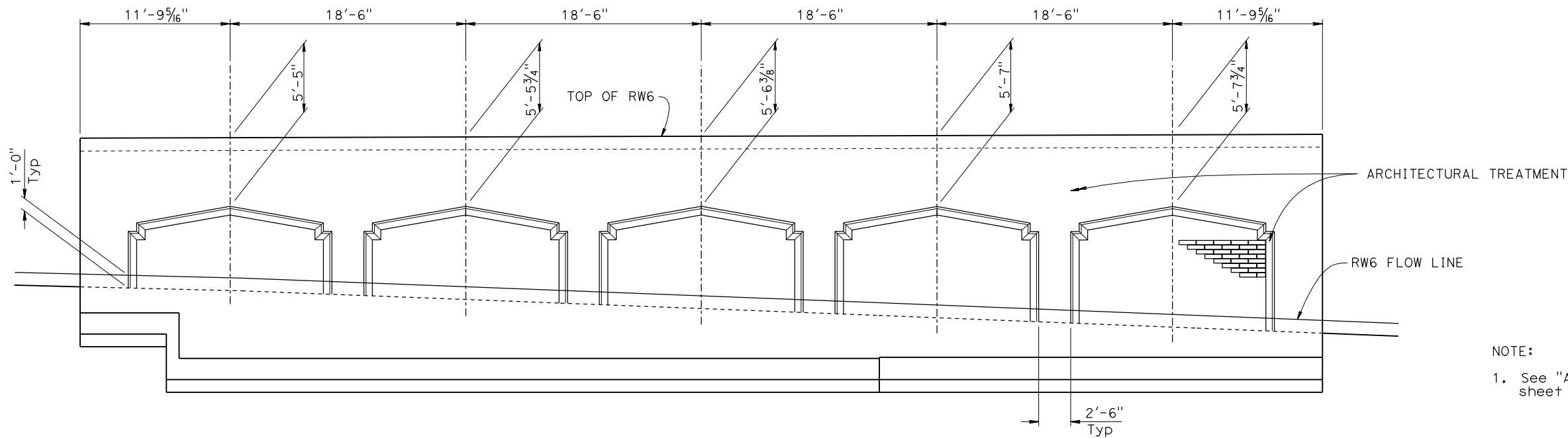
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

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RETAINING WALL 4 - ELEVATION

1" = 5'



RETAINING WALL 6 - ELEVATION

1" = 5'

NOTE:
1. See "ARCHITECTURAL TREATMENT DETAILS NO. 2" sheet for pattern details

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY I. TASABIA	CHECKED R. MELKO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2, 4, 6 ARCHITECTURAL TREATMENT DETAILS NO. 1			
	DETAILS	BY D. ELLIOTT	CHECKED R. MELKO			POST MILE				
	QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON							
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3594 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 13	OF 27

5-28-12

5-29-12

FILE => r#w2-a-gp.dgn

DIST

COUNTY

ROUTE

POST MILES
TOTAL PROJECT

SHEET
No.

TOTAL
SHEETS

06

Fre

5-30-12

DATE

REGISTERED CIVIL ENGINEER

RICHARD MELKO

No. C 61617

Exp. 06/30/13

CIVIL

REGISTERED PROFESSIONAL ENGINEER

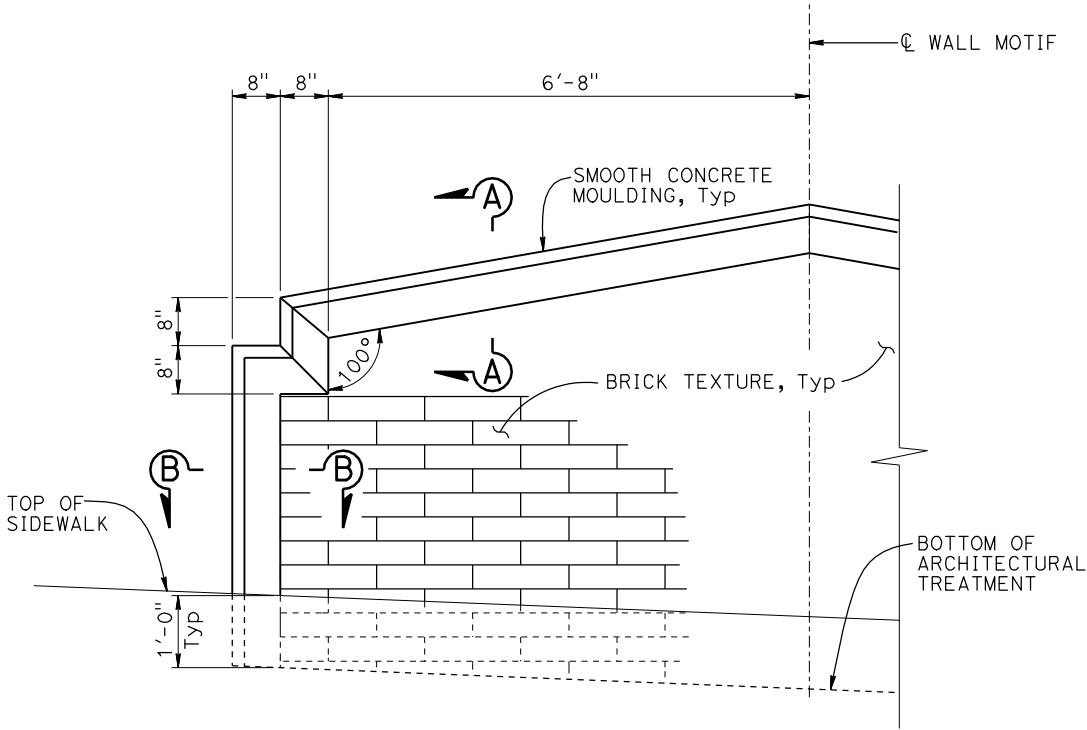
STATE OF CALIFORNIA

PLANS APPROVAL DATE

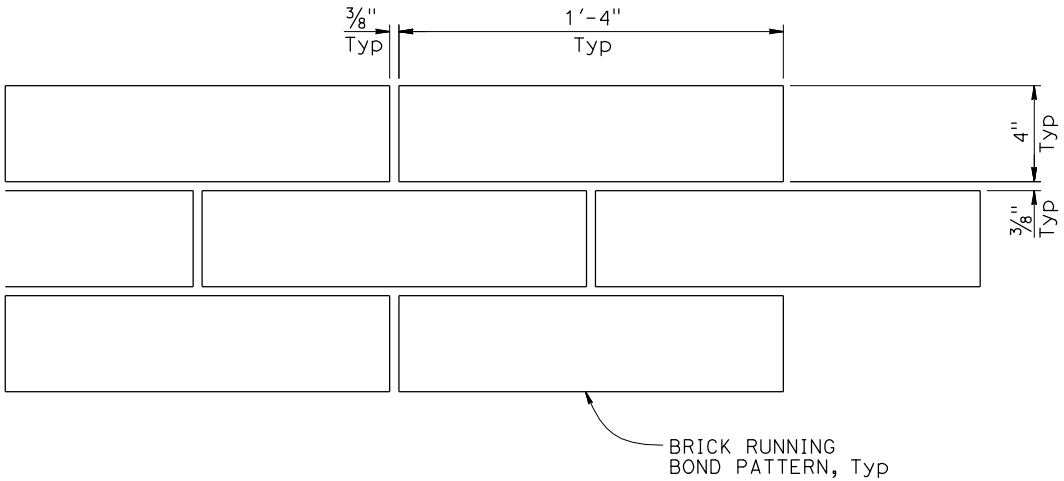
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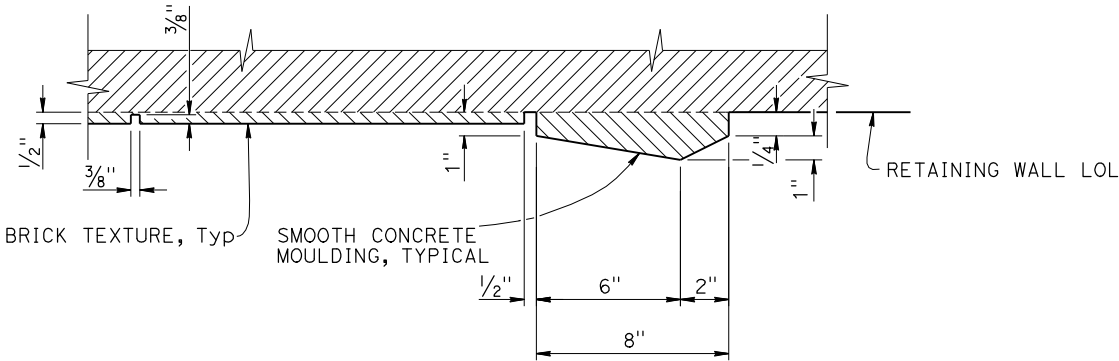
HIGH-SPEED RAIL AUTHORITY



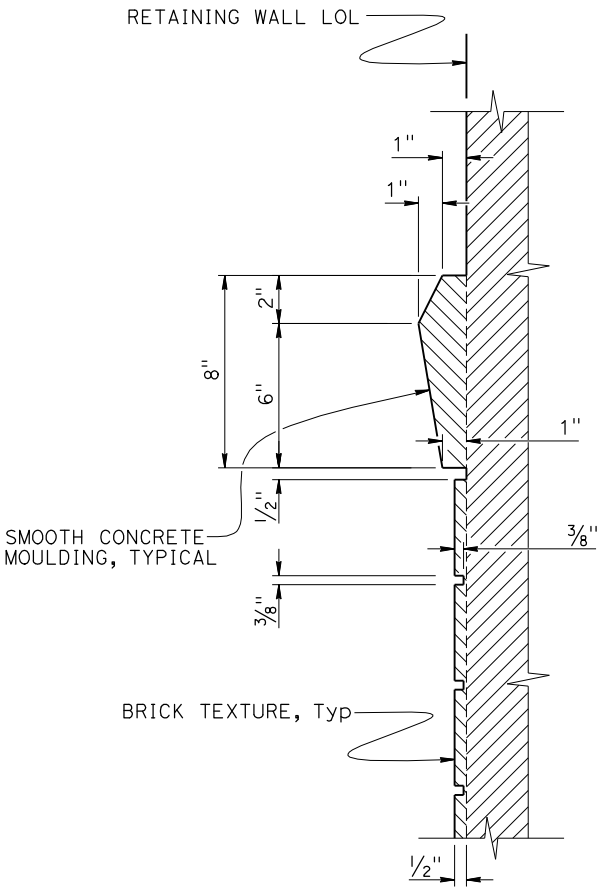
PARTIAL ARCHITECTURAL PATTERN WALL 4 & 6
3/4" = 1'-0"



BRICK TEXTURE DETAIL
3" = 1'-0"



SECTION B-B
3" = 1'-0"




SECTION A-A
3" = 1'-0"

NOTE:
1. Metal picket railing not shown for clarity, see "ARCHITECTURAL TREATMENT NO. 4" sheet.

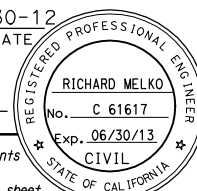
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY I. TASABIA	CHECKED R. MELKO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2, 4, 6						
	DETAILS	BY D. ELLIOTT	CHECKED R. MELKO			POST MILE							
	QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON										
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	UNIT: 3594 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
				FILE => rw2-a-gp.dgn									


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

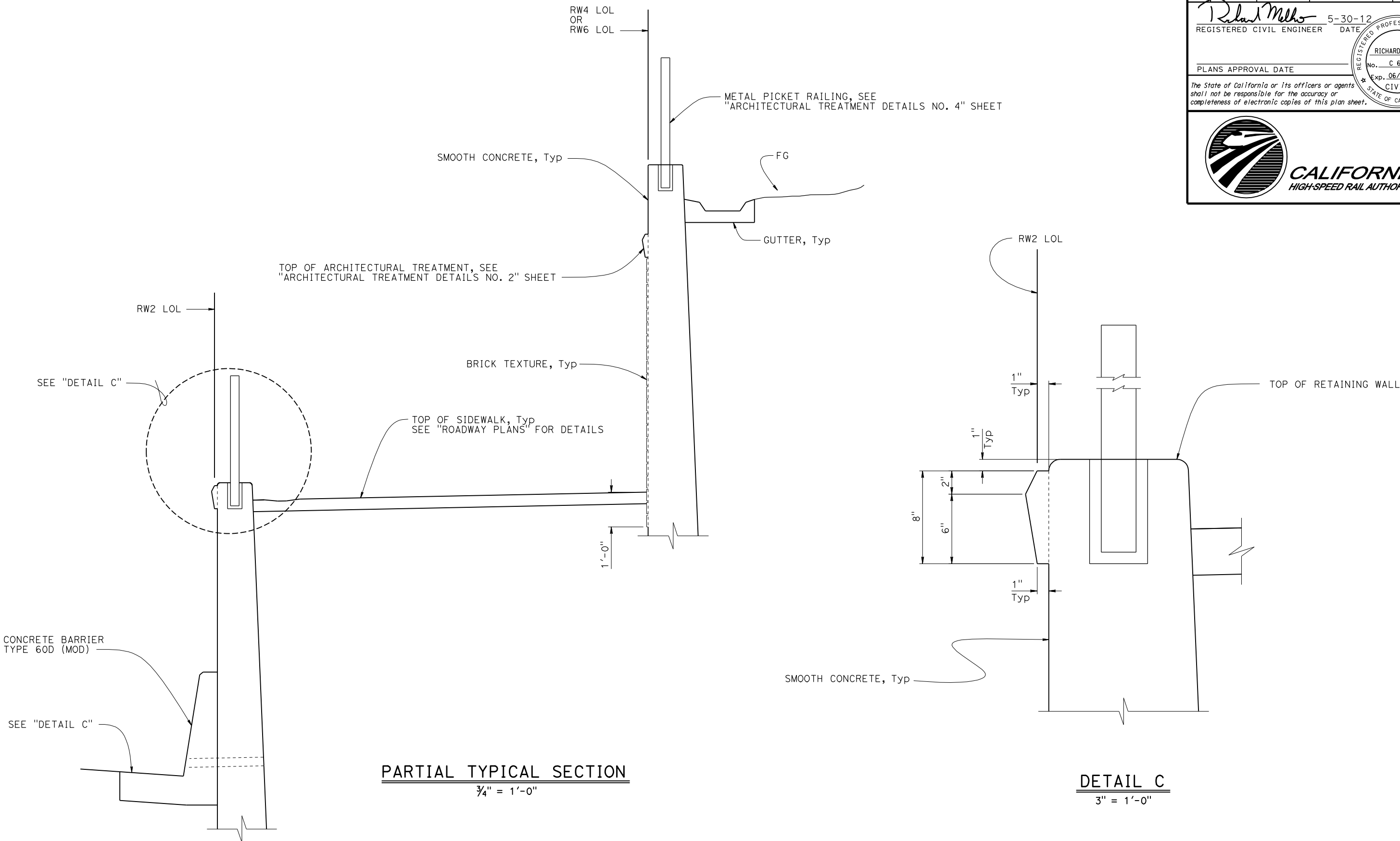

REGISTERED CIVIL ENGINEER

5-30-12
DATE

PLANS APPROVAL DATE



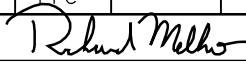
**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY



	DESIGN	BY I. TASABIA	CHECKED R. MELKO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2, 4, 6				
	DETAILS	BY D. ELLIOTT	CHECKED R. MELKO			POST MILE					
	QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON								
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	01234	UNIT: 3594 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 15	OF 27
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DATE PLOTTED => 30-MAY-2012
USERNAME => s123982

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

5-30-12
DATE

REGISTERED PROFESSIONAL ENGINEER

RICHARD MELKO

No. C 61617

Exp. 06/30/13

CIVIL

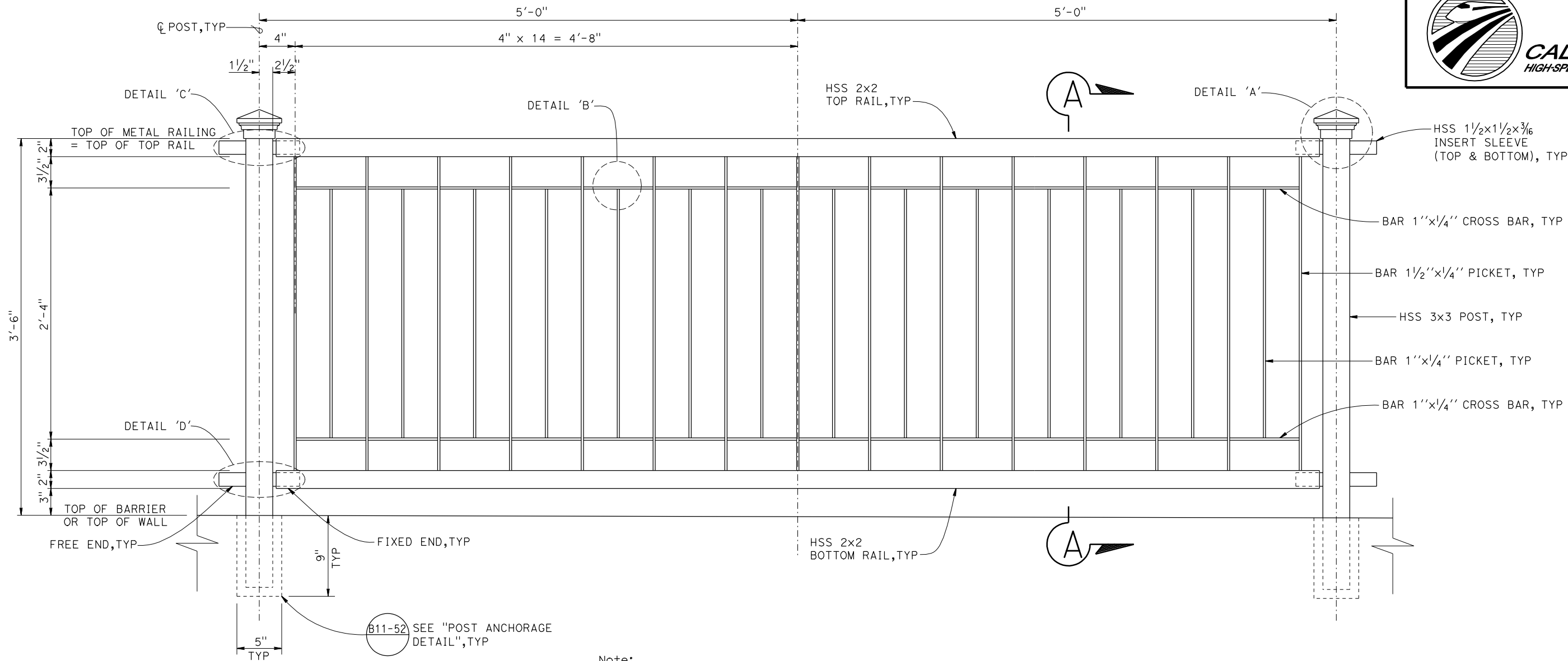
OF CALIFORNIA

PLANS APPROVAL DATE

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



Note:
For Section A-A and Detail 'A', 'B', 'C' & 'D',
see "ARCHITECTURAL TREATMENT DETAILS NO. 5" sheet.

PARTIAL ELEVATION - METAL PICKET RAILING
2" = 1'-0"

DESIGN	BY FRITZ HOFFMAN	CHECKED RICH MELKO
DETAILS	BY PETE VON SAVOYE	CHECKED RICH MELKO
QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED RACHEL WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2, 4, 6
ARCHITECTURAL TREATMENT DETAILS NO. 4

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3

UNIT: 3591 CONTRACT NO.: 06-2HT201
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

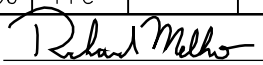
DISREGARD PRINTS BEARING
EARLIER REVISION DATES

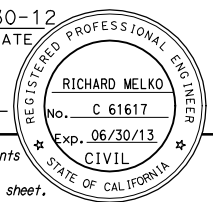
REVISION DATES	SHEET	OF
	16	27

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

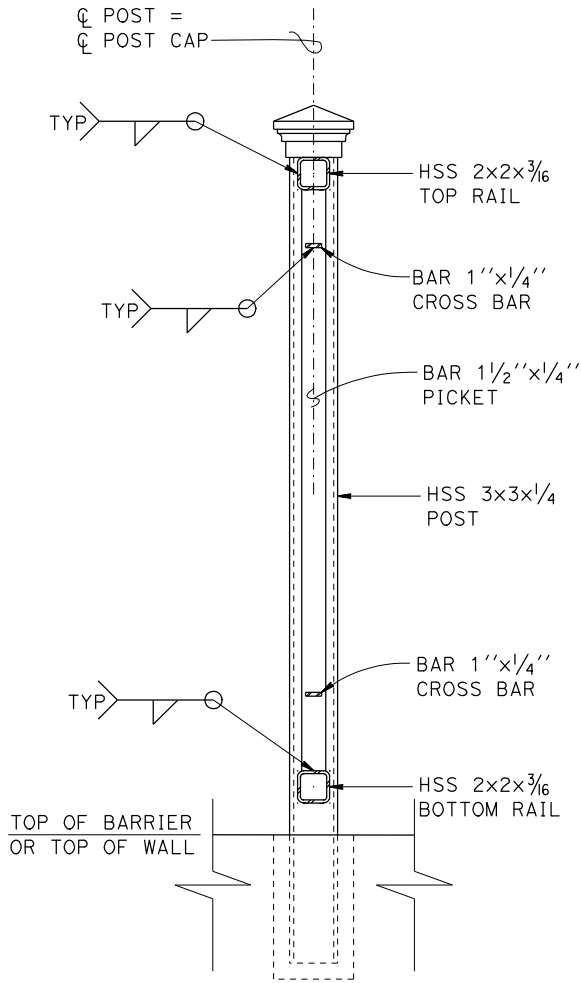

REGISTERED CIVIL ENGINEER
DATE 5-30-12



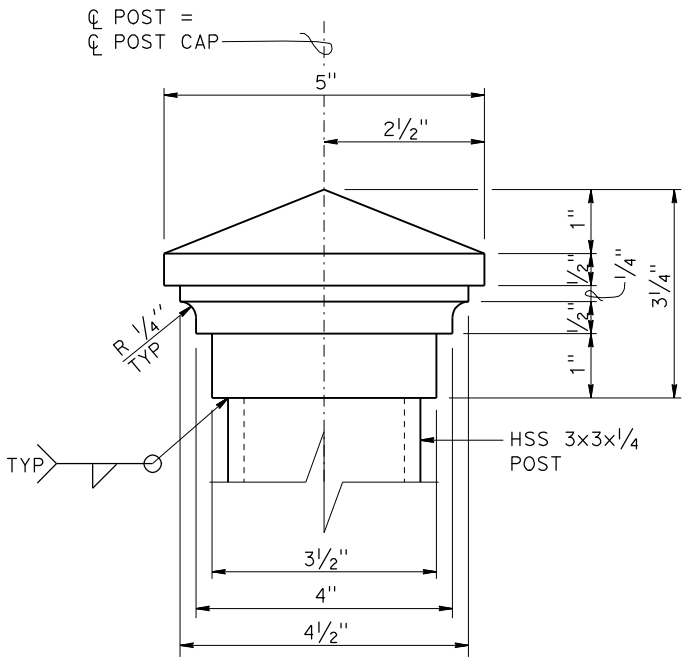
PLANS APPROVAL DATE _____

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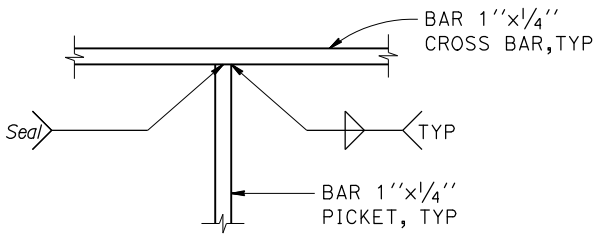
**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY



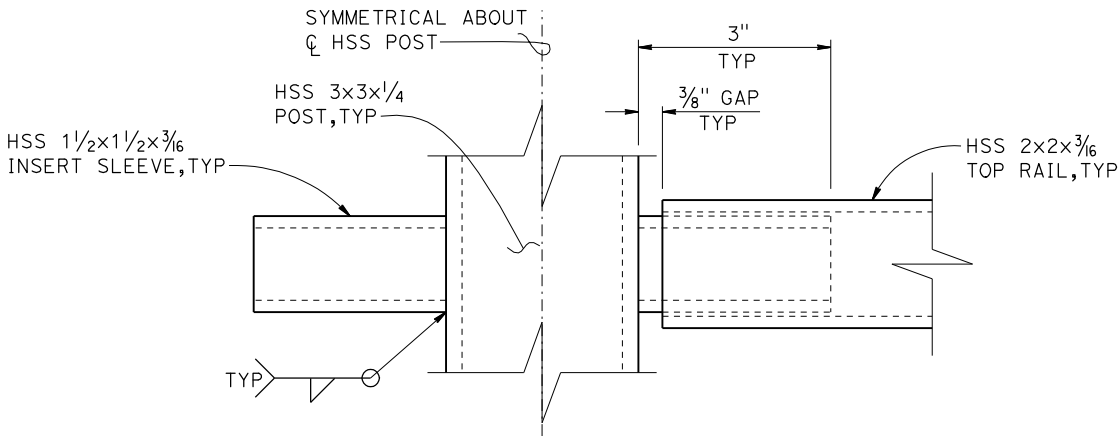
SECTION A-A
2" = 1'-0"



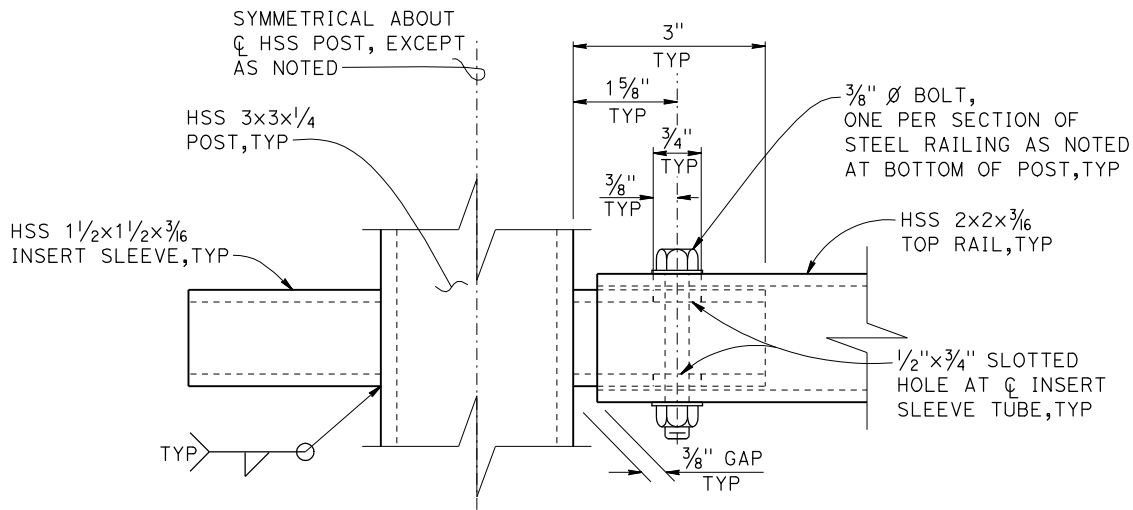
DETAIL 'A' - POST CAP
NO SCALE



DETAIL 'B'
NO SCALE



DETAIL 'C'
NO SCALE



FREE END

FIXED END

DETAIL 'D'
NO SCALE

- Notes:
1. Embed post into post cap 1/2" minimum.
 2. Post cap fabrication by the Contractor as approved by the Engineer. Minimum material thickness 3/16".
 3. Post cap may be modified or substituted with pre-manufactured post cap by the Contractor as approved by the Engineer.
 4. Paint after fabrication.
 5. Posts shall be vertical, typical.
 6. The "Fixed End" of each metal picket railing section has one bolt at the bottom rail. The "Free End" does not have a bolt at the top or bottom rail, typical.
 7. Omit Insert Sleeve on the outside of each end post.

DESIGN	BY FRITZ HOFFMAN	CHECKED RICH MELKO
DETAILS	BY PETE VON SAVOYE	CHECKED RICH MELKO
QUANTITIES	BY M. G. REYES-GUTIERREZ	CHECKED RACHEL WASHINGTON

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

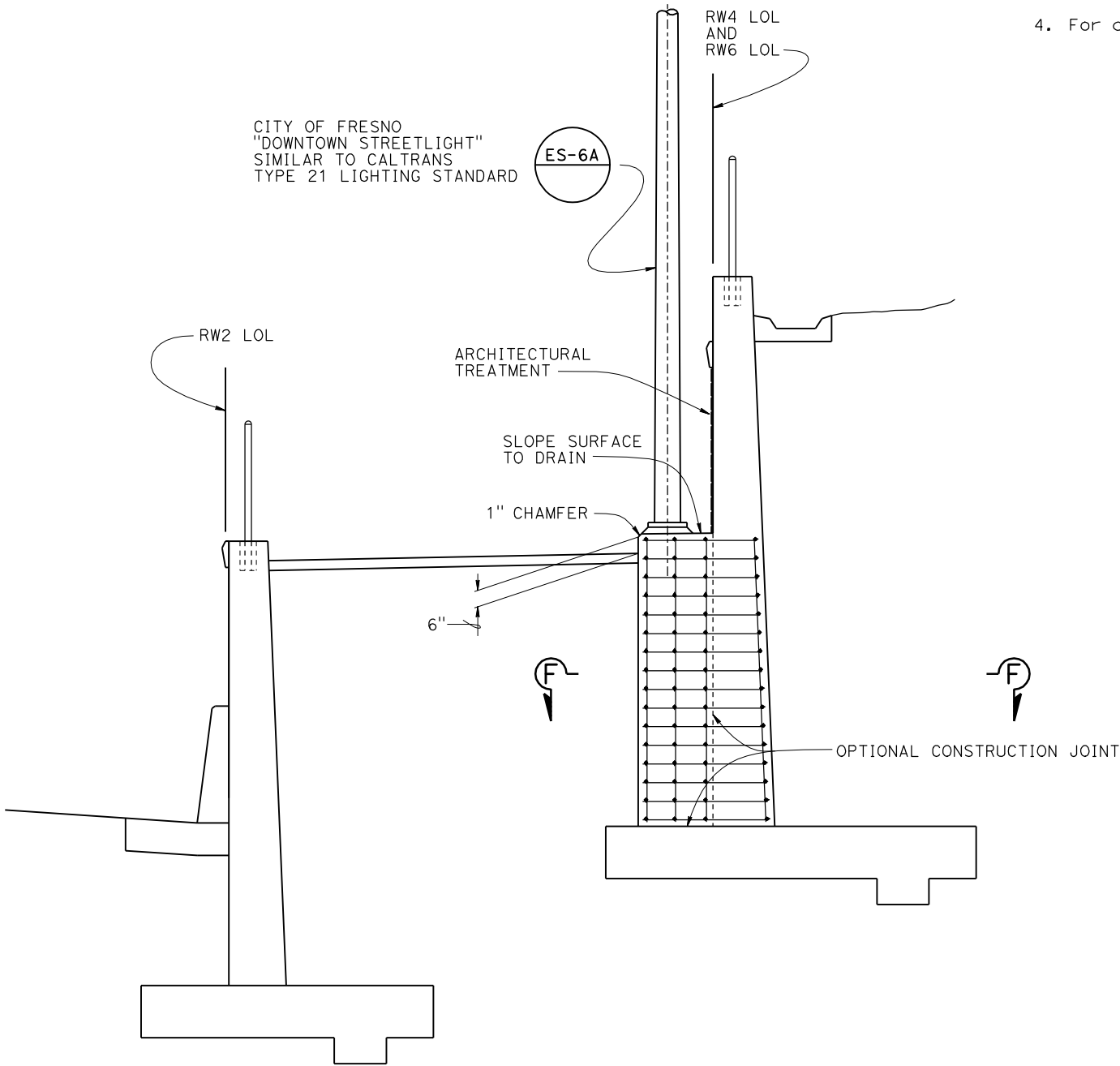
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

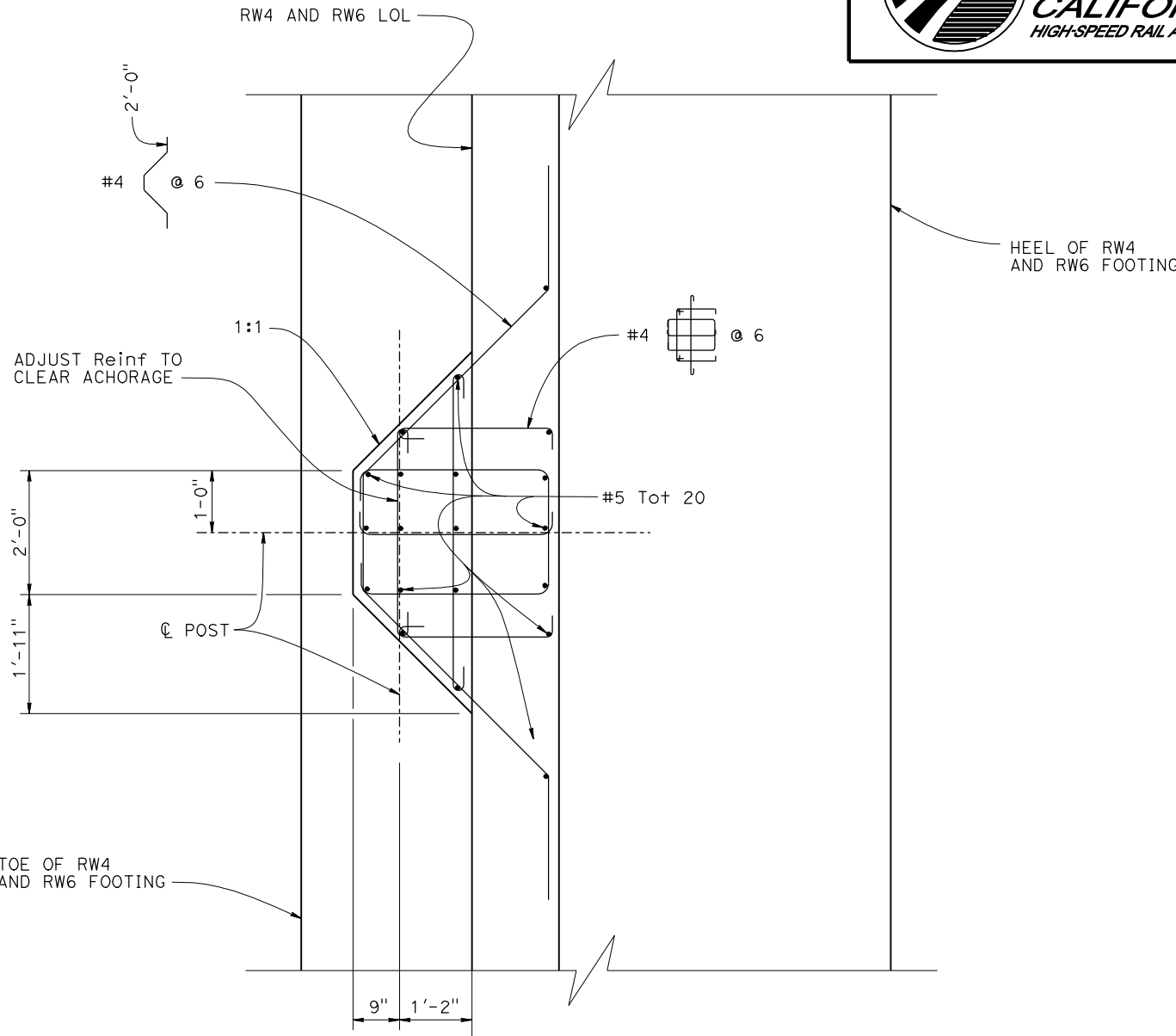
RETAINING WALL NO. 2, 4, 6
ARCHITECTURAL TREATMENT DETAILS NO. 5



- NOTES:
- Reinforcing steel shown is in addition to retaining wall reinforcing steel not shown.
 - Mounting bracket shown and pedestal design are based on Caltrans Type 21 Lighting Standard. For non-similar Lighting Standards and mountings, pedestal design shall be re-evaluated.
 - See "ROAD PLANS" for street light locations.
 - For details not shown, see RSP B3-1A ES-6A



TYPICAL SECTION
1/2" = 1'-0"



SECTION F-F
3/4" = 1'-0"

DESIGN	BY R. MELKO	CHECKED F. HOFFMAN
DETAILS	BY D. ELLIOTT	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

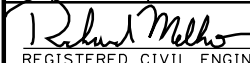
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2, 4, 6
LIGHTING SYSTEM DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				



5-30-12
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD MELKO
No. C 61617
Exp. 06/30/13
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

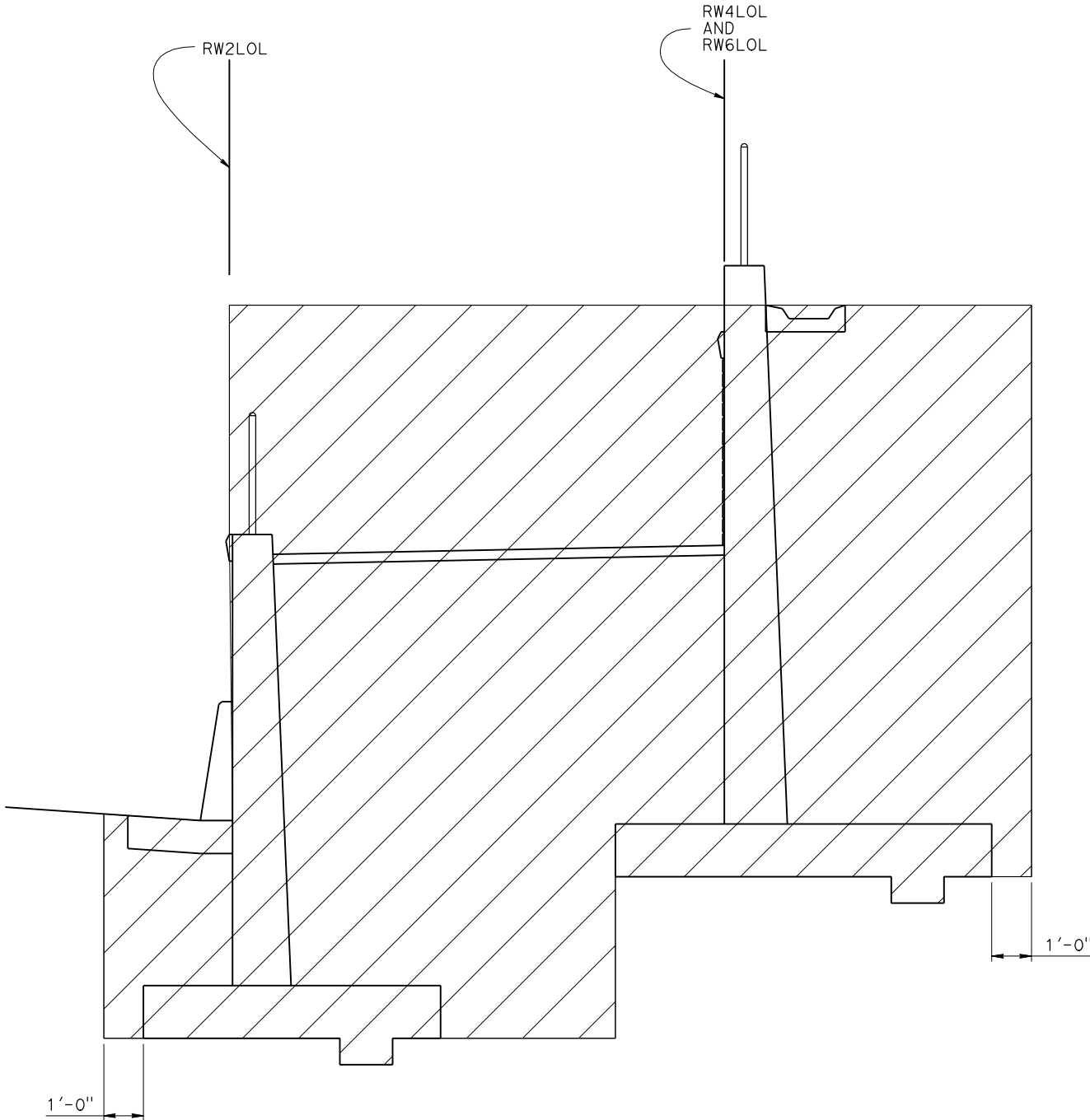
LEGEND:



DENOTES STRUCTURE EXCAVATION



DENOTES STRUCTURE BACKFILL

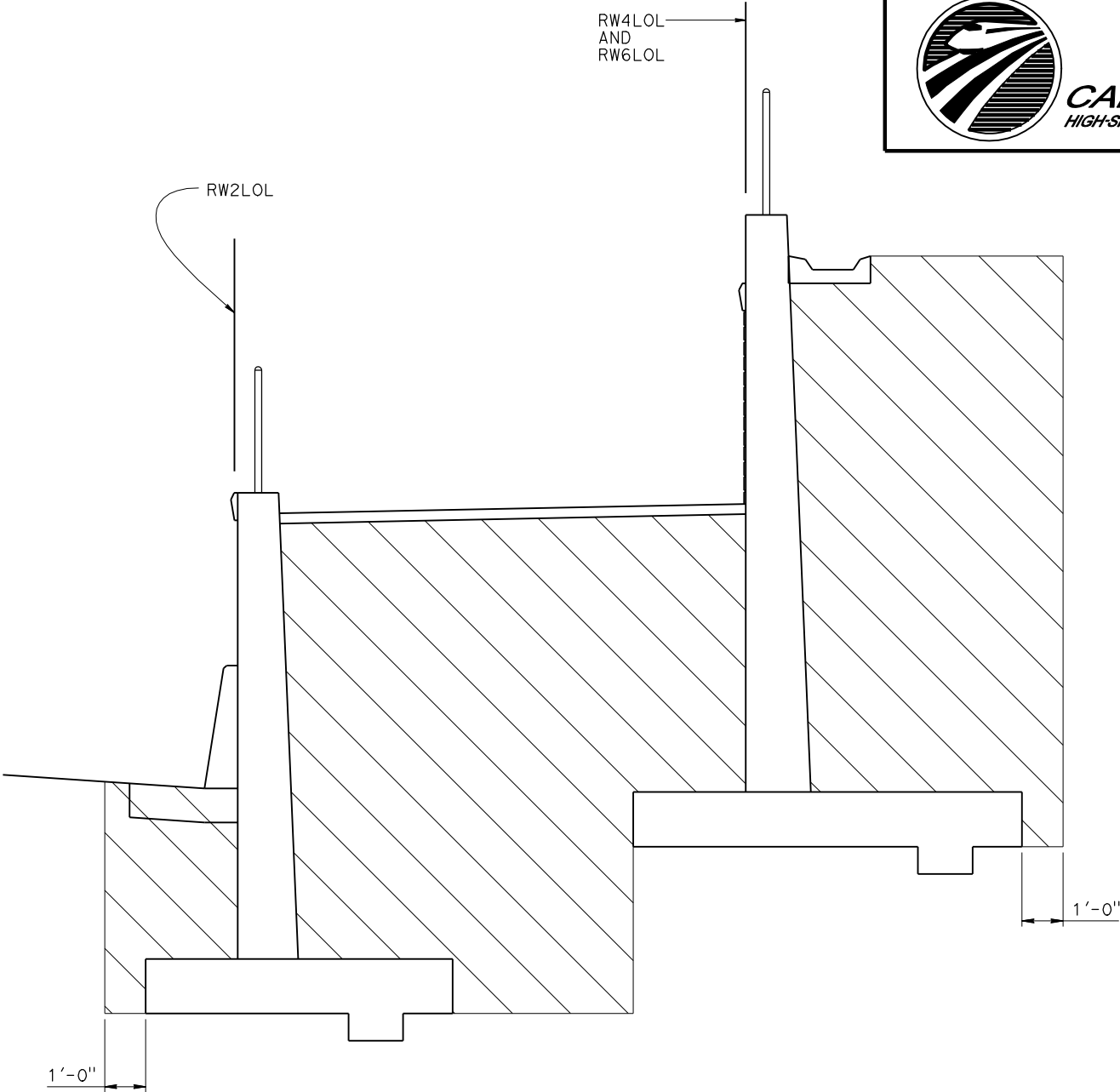


EXCAVATION

1/2" = 1'-0"

NOTE:

1. Contaminated soils likely within structure excavation limits, limits of contaminated soils to be determined by the Contractor.



BACKFILL

1/2" = 1'-0"

DESIGN	BY G. REYES-GUTIERREZ	CHECKED R. MELKO
DETAILS	BY D. ELLIOTT	CHECKED R. MELKO
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED S. MORIMOTO

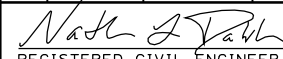
STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

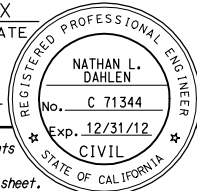
BRIDGE NO.
POST MILE

**RETAINING WALL NO. 2, 4, 6
EXCAVATION AND BACKFILL DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

X
DATE



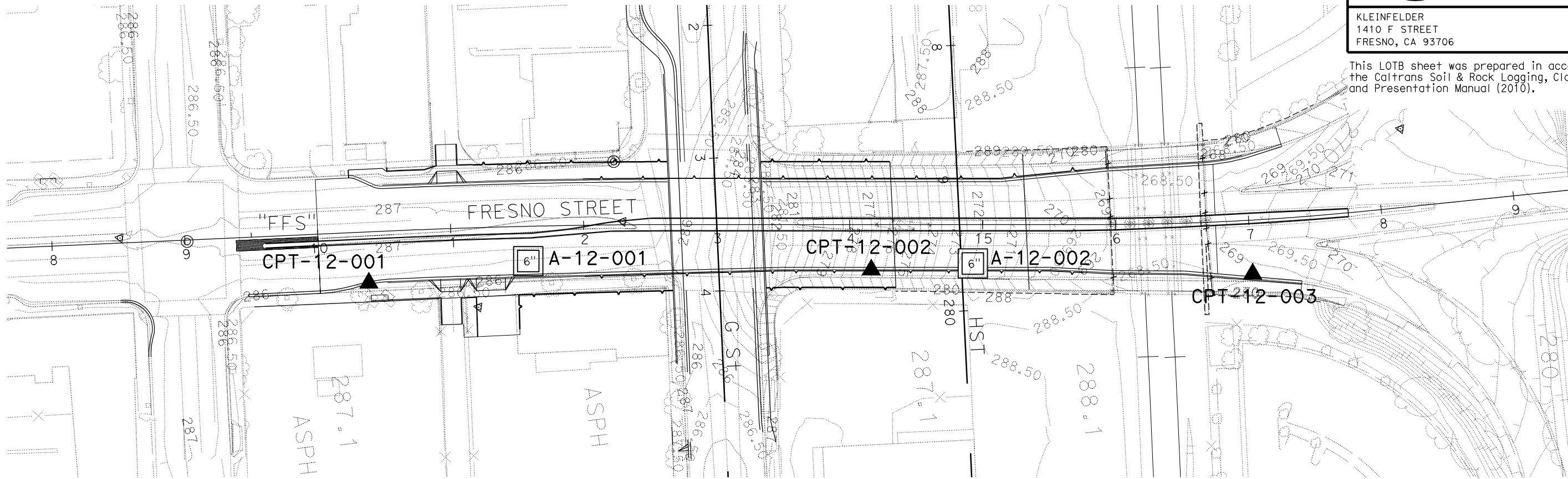
PLANS APPROVAL DATE

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KLEINFELDER
1410 F STREET
FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).



BENCHMARKS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

4-SON-116 FILE 01 OF 03
PHOTO ASC: 0820-17 PHOTO DATE: 10-23-07 PHOTO SCALE 1:3000
MAP ASC: 0820-17 MAP COMPLETION DATE: 3-31-08
FILENAME: 408217e0501.dgn
DIGITAL COMPILATION BY:
RADMAN AERIAL SURVEYS

VERTICAL DATUM: NAVD 1988
COORDINATE SYSTEM: CCS 83 (1991.35) ZONE 2
UNITS: US SURVEY FEET MAP SCALE 1"= 50' CONTOUR INTERVAL: 1'
DESIGN PLANE: 32R G0= 6065251.6352,1767251.6352,-214748.3648

Note:
1. - Marl M-10 truck mounted rig with automatic hammer.

DESIGN	BY G. REYES-GUTIERREZ	CHECKED DAVID ALVAREZ
DETAILS	BY AL SANCHEZ	CHECKED NATHAN DAHLEN
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE

RETAINING WALL NO. 2, 4, 6
LOG OF TEST BORINGS 1 OF 8

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS



UNIT: 3591 CONTRACT NO.: 06-2HT201
PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

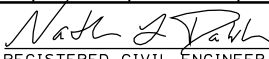
REVISION DATES	SHEET	OF
5-07-12	20	27

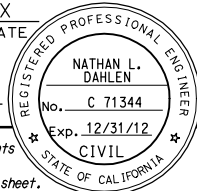
FILE => 06-2ht201-z-ltb01-c.dgn

USERNAME => s123982 DATE PLOTTED => 30-MAY-2012 TIME PLOTTED => 15:20

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER X
DATE

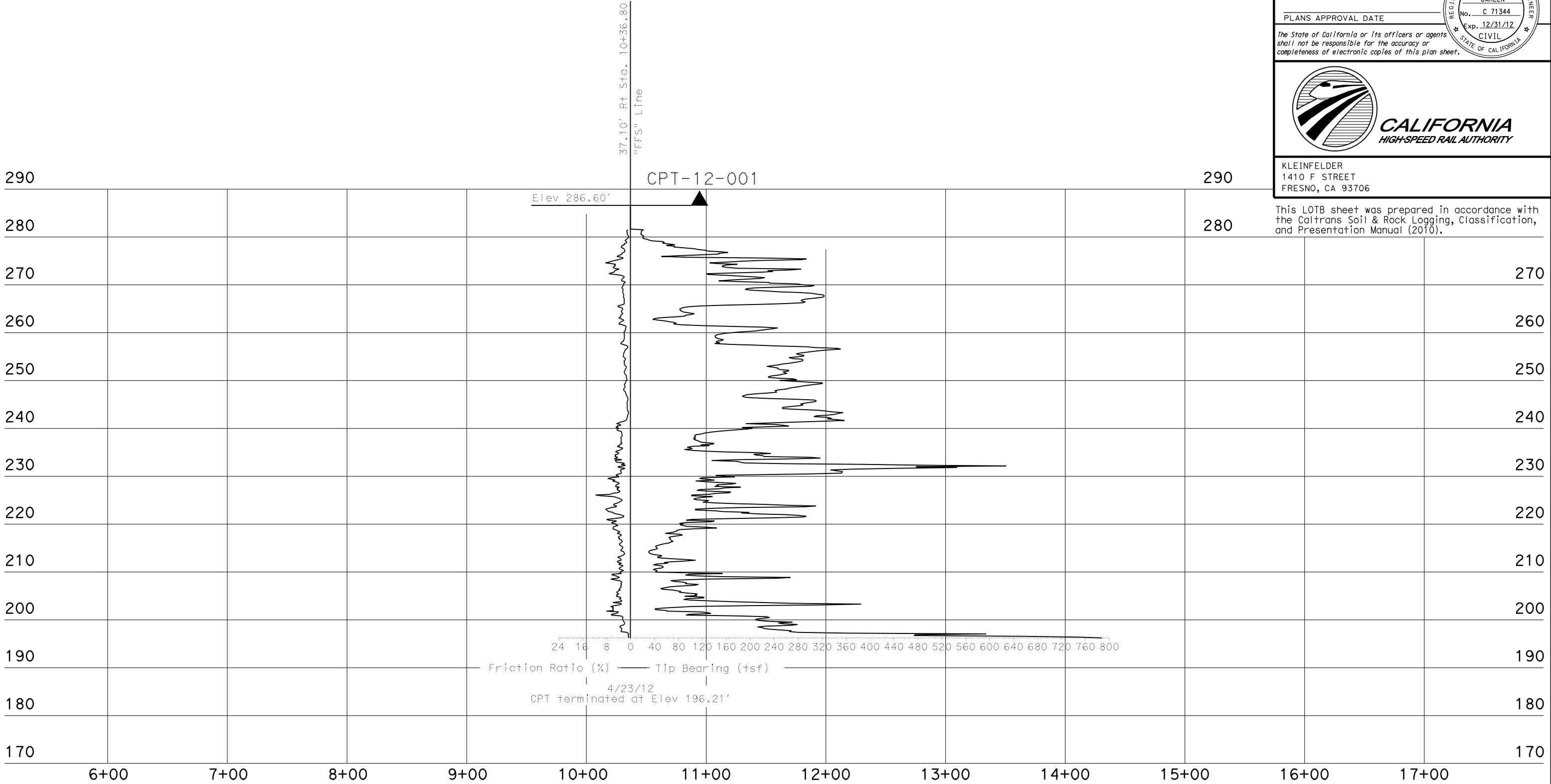


PLANS APPROVAL DATE

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**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY

KLEINFELDER
1410 F STREET
FRESNO, CA 93706



PROFILE
HOR. 1"=40'
VER. 1"=10'

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY G. REYES-GUTIERREZ	CHECKED DAVID ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2, 4, 6 LOG OF TEST BORINGS 2 OF 8			
	DETAILS	BY AL SANCHEZ	CHECKED NATHAN DAHLEN			POST MILE				
	QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON							
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1	CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 21	OF 27

FILE => 06-2ht201-z-ltb02-c.dgn

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8

DIST06COUNTYFreROUTEPOST MILESTOTAL PROJECTTOTAL PROJECTSHEET No. TOTAL SHEETS

Nathan L. Dahlen

REGISTERED CIVIL ENGINEER

X

DATE

REGISTERED PROFESSIONAL ENGINEER

NATHAN L. DAHLEN

No. C 71344

Exp. 12/31/12

CIVIL

STATE OF CALIFORNIA

PLANS APPROVAL DATE

CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

KLEINFELDER

1410 F STREET

FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

300

290

280

270

260

250

240

230

220

210

200

190

180

7+00

8+00

9+00

10+00

11+00

12+00

13+00

14+00

15+00

16+00

17+00

18+00

26.16' Rt Sta. 11+57.73

"FFS" Line

A-12-001

Elev 286.60'

6"

9 1.4

50 2.5

47 1.4

51 2.5

37 1.4

54 2.5

43 1.4

50 2.5

41 1.4

46 2.5

45 1.4

49 2.5

32 1.4

55 2.5

55 1.4

4-30-12

Terminated at Elev 210.10'

ER_i = 74.3%

Silty SAND (SM): medium dense, brown, moist, coarse to fine grained, weakly cemented

-medium to fine grained sand

Sandy SILT (ML): very dense, dark gray, moist, fine grained

-dense, gray brown

-very dense, brown to dark brown, PP>=4.5 tsf

-dense, weakly cemented

Poorly Graded SAND with SILT (SP-SM): dense, yellow brown, moist, medium to fine grained

-very dense, coarse to fine grained sand

Sandy SILT (ML): dense, dark brown, moist, fine grained, trace of clay

SILT (ML): very stiff, gray brown, moist, trace of clay

-PP>=4.5 tsf

-PP=2.5 tsf

Sandy SILT (ML): dense, red brown, moist, fine grained

-PP>=4.5 tsf

Sandy SILT (ML): very dense, red brown, moist, fine grained

-PP>=4.5 tsf

Silty SAND (SM): very dense, gray brown, moist, fine grained

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

DESIGNBYG. REYES-GUTIERREZCHECKEDDAVID ALVAREZ

DETAILSBYAL SANCHEZCHECKEDNATHAN DAHLEN

QUANTITIESBYG. REYES-GUTIERREZCHECKEDR. WASHINGTON

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

STRUCTURE DESIGN

DESIGN BRANCH 6

BRIDGE NO.

POST MILE

RETAINING WALL NO. 2, 4, 6

LOG OF TEST BORINGS 3 OF 8

UNIT: 3591 CONTRACT NO.: 06-2HT201

PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

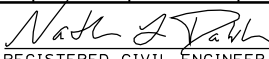
SHEET 22 OF 27

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 06-2ht201-z-ltb03-c.dgn

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				


REGISTERED CIVIL ENGINEER

X
DATE

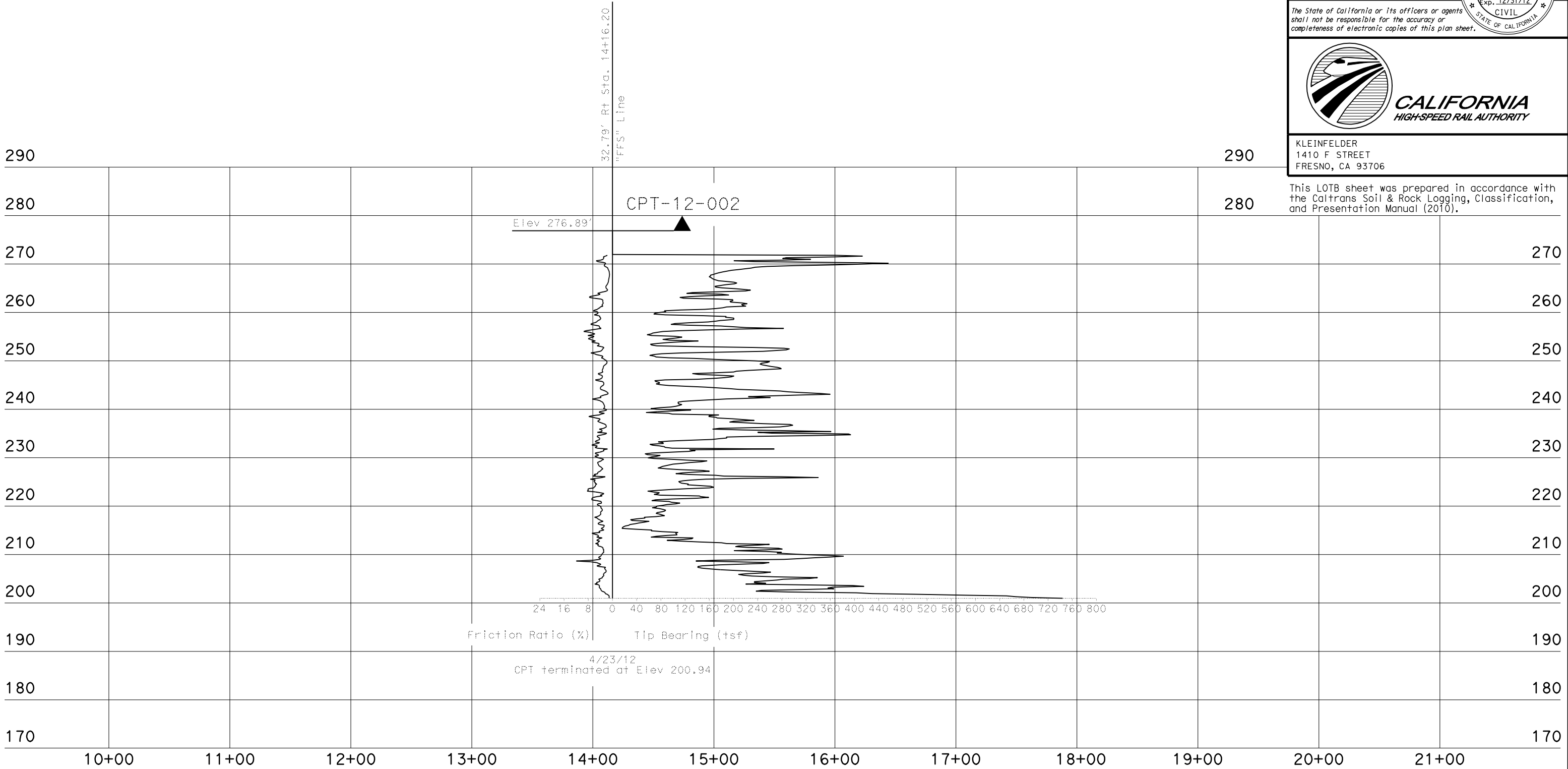
REGISTERED PROFESSIONAL ENGINEER
NATHAN L. DAHLEN
No. C 71344
Exp. 12/31/12
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

**CALIFORNIA**
HIGH-SPEED RAIL AUTHORITY

KLEINFELDER
1410 F STREET
FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).



PROFILE

HOR. 1"=40'
VER. 1"=10'

DESIGN	BY G. REYES-GUTIERREZ	CHECKED DAVID ALVAREZ
DETAILS	BY AL SANCHEZ	CHECKED NATHAN DAHLEN
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.
POST MILE


RETAINING WALL NO. 2, 4, 6
LOG OF TEST BORINGS 4 OF 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fres				

Nathan L. Dahlen
 REGISTERED CIVIL ENGINEER X DATE

PLANS APPROVAL DATE

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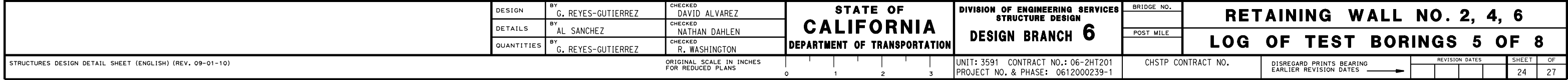


CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

KLEINFELDER
 1410 F STREET
 FRESNO, CA 93706

REGISTERED PROFESSIONAL ENGINEER
 NATHAN L. DAHLEN
 No. C 71344
 Exp. 12/31/12
 CIVIL
 STATE OF CALIFORNIA



FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 8

DIST06COUNTYFreROUTEPOST MILESTOTAL PROJECTTOTAL SHEETS

Nathan L. Dahlen

REGISTERED CIVIL ENGINEER

X

DATE

REGISTERED PROFESSIONAL ENGINEER

NATHAN L. DAHLEN

No. C 71344

Exp. 12/31/12

CIVIL

PLANS APPROVAL DATE

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CALIFORNIA

HIGH-SPEED RAIL AUTHORITY

KLEINFELDER

1410 F STREET

FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

DESIGNBYG. REYES-GUTIERREZCHECKEDDAVID ALVAREZ

DETAILSBYNATHAN DAHLEN

QUANTITIESBYG. REYES-GUTIERREZCHECKEDR. WASHINGTON

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

STRUCTURE DESIGN

DESIGN BRANCH 6

BRIDGE NO.

POST MILE

RETAINING WALL NO. 2, 4, 6 (RIGHT WALL)

LOG OF TEST BORINGS 6 OF 8

UNIT: 3591 CONTRACT NO.: 06-2HT201

PROJECT NO. & PHASE: 0612000239-1

CHSTP CONTRACT NO.

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET 25 OF 27

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 06-2ht201-z-ltb06-c.dgn

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre				

Nathan L. Dahlen
 REGISTERED CIVIL ENGINEER X
 DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 NATHAN L. DAHLEN
 No. C 71344
 Exp. 12/31/12
 CIVIL
 STATE OF CALIFORNIA



CALIFORNIA
 HIGH-SPEED RAIL AUTHORITY

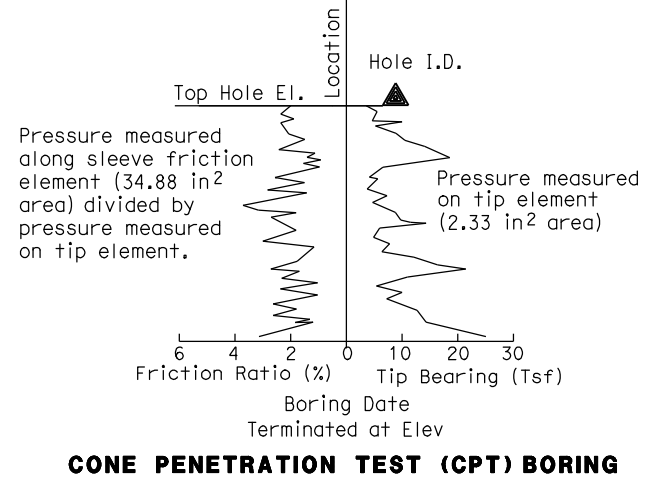
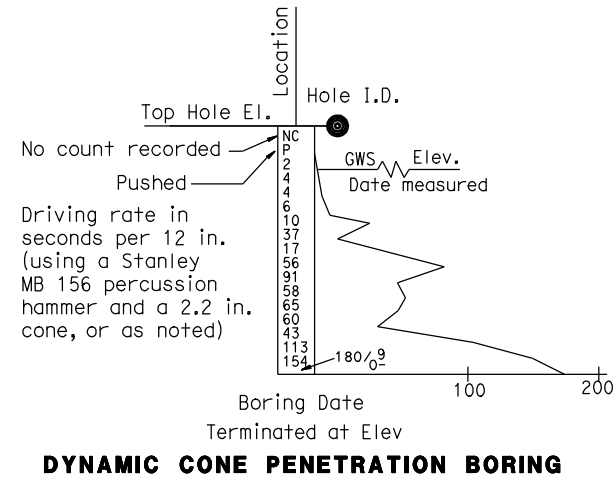
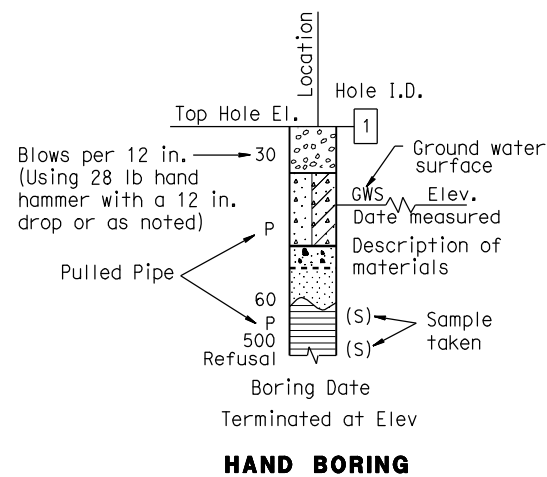
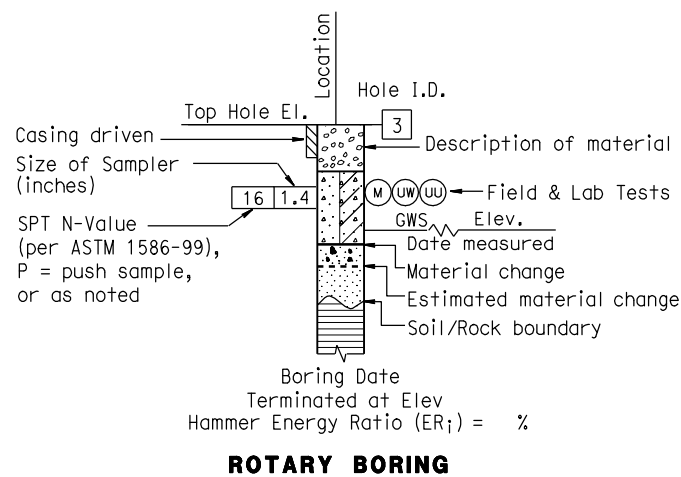
KLEINFELDER
 1410 F STREET
 FRESNO, CA 93706

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778)
	O	Other (note on LOTB)

Note: Size in inches.

Consistency of Cohesive Soils				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



		DESIGN	BY G. REYES-GUTIERREZ	CHECKED DAVID ALVAREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	RETAINING WALL NO. 2, 4, 6						
		DETAILS	BY AL SANCHEZ	CHECKED NATHAN DAHLEN			POST MILE	LOG OF TEST BORINGS 7 OF 8						
		QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON										
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3591 CONTRACT NO.: 06-2HT201 PROJECT NO. & PHASE: 0612000239-1		CHSTP CONTRACT NO.	DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES		SHEET	OF
													26	27

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).

GROUP SYMBOLS AND NAMES					
Graphic/Symbol		Group Names		Graphic/Symbol	
	GW	Well-graded GRAVEL			CL
		Well-graded GRAVEL with SAND			
	GP	Poorly-graded GRAVEL			CL
		Poorly-graded GRAVEL with SAND			
	GW-GM	Well-graded GRAVEL with SILT			CL-ML
		Well-graded GRAVEL with SILT and SAND			
	GW-GC	Well-graded GRAVEL with CLAY			CL-ML
		Well-graded GRAVEL with CLAY and SAND			
	GP-GM	Poorly-graded GRAVEL with SILT			ML
		Poorly-graded GRAVEL with SILT and SAND			
	GP-GC	Poorly-graded GRAVEL with CLAY			ML
		Poorly-graded GRAVEL with CLAY and SAND			
	GM	SILTY GRAVEL			OL
		SILTY GRAVEL with SAND			
	GC	CLAYEY GRAVEL			OL
		CLAYEY GRAVEL with SAND			
	GC-GM	SILTY, CLAYEY GRAVEL			OL
		SILTY, CLAYEY GRAVEL with SAND			
	SW	Well-graded SAND			CH
		Well-graded SAND with GRAVEL			
	SP	Poorly-graded SAND			CH
		Poorly-graded SAND with GRAVEL			
	SW-SM	Well-graded SAND with SILT			MH
		Well-graded SAND with SILT and GRAVEL			
	SW-SC	Well-graded SAND with CLAY			MH
		Well-graded SAND with CLAY and GRAVEL			
	SP-SM	Poorly-graded SAND with SILT			MH
		Poorly-graded SAND with SILT and GRAVEL			
	SP-SC	Poorly-graded SAND with CLAY			OH
		Poorly-graded SAND with CLAY and GRAVEL			
	SM	SILTY SAND			OH
		SILTY SAND with GRAVEL			
	SC	CLAYEY SAND			OH
		CLAYEY SAND with GRAVEL			
	SC-SM	SILTY, CLAYEY SAND			OH
		SILTY, CLAYEY SAND with GRAVEL			
	PT	PEAT			OL/OH
		COBBLES			OL/OH
		COBBLES and BOULDERS			

FIELD AND LABORATORY TESTING

- C

Consolidation (ASTM D 2435)
- CL

Collapse Potential (ASTM D 5333)
- CP

Compaction Curve (ASTM D 1557)
- CR

Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- CU

Consolidated Undrained Triaxial (ASTM D 4767)
- DS

Direct Shear (ASTM D 3080)
- EI

Expansion Index (ASTM D 4829)
- M

Moisture Content (ASTM D 2216)
- OC

Organic Content-% (ASTM D 2974)
- P

Permeability (CTM 220)
- PA

Particle Size Analysis (ASTM D 422)
- PI

Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- PL

Point Load Index (ASTM D 5731)
- PM

Pressure Meter
- R

R-Value (CTM 301)
- SE

Sand Equivalent (CTM 217)
- SG

Specific Gravity (AASHTO T 100)
- SL

Shrinkage Limit (ASTM D 427)
- SW

Swell Potential (ASTM D 4546)
- UC

Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- UU

Unconsolidated Undrained Triaxial (ASTM D 2850)
- UW

Unit Weight (ASTM D 4767)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N ₆₀ (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

DESIGN	BY G. REYES-GUTIERREZ	CHECKED DAVID ALVAREZ
DETAILS	BY AL SANCHEZ	CHECKED NATHAN DAHLEN
QUANTITIES	BY G. REYES-GUTIERREZ	CHECKED R. WASHINGTON

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.

POST MILE

RETAINING WALL NO. 2, 4, 6

LOG OF TEST BORINGS 8 OF 8